DAFFODILS

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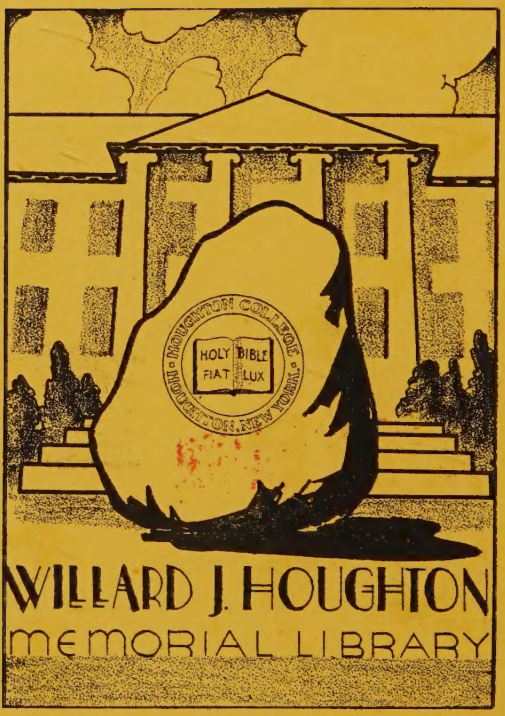

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The Christian student must be acquainted with a wide span of literature, including much of the worthy and some of the unworthy.

The Christian student recognizes that an enemy has sown tares in the wheat of God's truth.

Inclusion of this book in the library does not imply endorsement by Houghton College. The student must prove all things, holding fast the good; the teacher must rightly divide and interpret all in accordance with Holy Scripture.

DAFFODILS
NARCISSUS
AND HOW TO GROW THEM

A CENTURY-OLD FIELD OF DAFFODILS

On the old Lalor homestead near Trenton, N. J., the old English trumpet daffodil (*N. Pseudo-Narcissus*) has been growing wild for a hundred years. When comfortably naturalised, the season of flowering is somewhat earlier than in ordinary garden cultivation and there is always bloom in this field by the 25th of March

DAFFODILS
NARCISSUS
AND HOW TO GROW THEM

As Hardy Plants and for Cut Flowers
With a Guide to the Best
Varieties

By
A. M. KIRBY

ILLUSTRATED

GARDEN CITY NEW YORK
DOUBLEDAY, PAGE & COMPANY
1914

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PUBLISHED, AUGUST, 1907

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DAFFODILS
NARCISSUS
AND HOW TO GROW THEM

CHAPTER I

Old-time and Modern Daffodils and Narcissus

The largest flowers of early spring—Universal adaptation—The homes of the wild species—Some early history—A word as to prices—The daffodil in legend and verse—What is a daffodil or a narcissus?

The narcissus and daffodil have long been the most world-widely popular of all spring flowering bulbous plants. It is not alone the individual and collective beauty of their flowers that endears them to our hearts but the bravery of their advent, for "the time of the daffodil" closes the gates on bleak winter and ushers in, with trumpets of gold, longed-for spring.

It is true that these flowers may have been preceded by those of snowdrops, scillas, crocus, etc., with their boisterous weather accompaniments, but the awakening of the daffodils —among the earliest of the important flowers of a new season—means the advent of mild and genuine spring.

What pleasurable associations the very mention of their names uncurtains among those of us who have been fortunate enough to be brought up in "old-fashioned garden" environment. We recall our annual spring delight in watching the sturdy development from mother earth—almost before winter's snow had melted—of groups of spear-like leaves, followed by big, fat buds that soon unsheathed their blossoms of silver and gold.

WHERE TO GROW THEM

The narcissus and daffodils may be successfully grown in so many locations, and under so many different conditions of soil, and climate, that we need scarcely ask "where may they be grown?" Their freedom from cultural complications is, indeed, one of their chief merits. With the exception of a few of the Mediterranean and Oriental types that love warm, dry hillsides or well-drained rockeries, the great majority of varieties is nearly as hardy as rocks, and will grow, thrive and flower almost anywhere—in garden beds, in herbaceous borders and shrubberies, in grassy turf of lawn, meadow or woodland,

year after year, without any special care. Of course congenial soil, location and culture will produce better results than conditions less congenial; deep, cool, well-drained, sandy loam, in a semi-shaded situation, being the desideratum, but, like grass, they will exist almost anywhere, flourishing most luxuriantly when especially well placed. Correct garden culture produces the finest individual flowers, though the collective wealth of beauty of a colony naturalised on a grassy slope or stream-side bank is a feast for the eye.

But it is not exclusively in the open ground that narcissus and daffodils may be grown, flowered and enjoyed. Most of them (the very latest flowering sorts only excluded) are amenable to artificial cultural conditions; that is, they may be flowered during the winter in conservatory, greenhouse or window, in pots, pans or flats of soil, and some of them even in nothing more than a bowl of moss or gravel and water.

NARCISSUS AND DAFFODILS IN THE WILD

Many wild forms of narcissus and daffodil, with their crosses, are still to be found

in their original locations. The typical narcissus, or small-cupped poeticus and Tazetta types, are indigenous to regions bordering the Mediterranean, their centre being in Greece and Italy; some of the cluster-flowered Tazettas (better known as polyanthus narcissus) are wild in the Orient as far as Asia; the trumpet narcissus or true daffodils are mostly found wild in Great Britain and Western Europe.

These three important species, with a few sub-species of lesser importance, slowly spreading inch by inch, annually, by offshoot or seed, over mountain and through valley—wherever conditions invited—often met; and as all wild, single-flowering narcissus produce seed, the different types sometimes crossing when in proximity and in flower at the same time, they have thus blended and given rise to mixed descendants—natural hybrids, some of which resemble one parent, some the other. Occasionally the offspring or hybrid would be so different from either parent that a new wild type was produced.

In addition to the above causes of variety in wild narcissus and daffodils, other natural

influences have assisted in typifying several forms. Particularly responsible for this are local conditions of soil, climate, altitude and season—for environment moulds character and fixes types through the survival of the fittest. All of these wild types, by the way, are favourites for naturalising, as they show no deterioration under such conditions, as do the larger flowering modern garden hybrids when grown wild.

The first gardens that people had were composed of medicinal herbs, then were added a few things good to eat, and afterwards pretty plants to embellish. Among the first chosen flowering plants for gardens were narcissus and daffodils. In some gardens, a number of collected kinds were grown, which sometimes resulted in "garden crosses" and the production of new forms and varieties. Occasionally, new kinds of marked beauty or distinctiveness would be raised. These pleasing surprises, added to the intrinsic value of the narcissus as garden flowers, fanned the interest of cultivators into such a glow that some cultivators eventually learned to artificially cross different types and even become

expert in producing definite results. But it was not until the last century that any great strides were thus made. In the year 1548 Turner is supposed to have described all then known sorts—numbering twenty-four—in "*A Few Narcissus of Dieverse Sortes.*" A hundred years later species, sub-species and their varieties had apparently increased to ninety-four, according to John Parkinson in his "*Paradisus Terrestris.*"

Between 1840 and 1860, two English amateurs, William Backhouse, banker of Darlington, and Edward Leeds, stockbroker of Manchester, did some remarkably good work in hybridising narcissus and daffodils. The collections of seedlings of these two gentlemen have been largely responsible for increasing popular interest in the cultivation and crossing of narcissus and daffodils during recent years. Among other devotees who have also done good work are Messrs. Barr, Burbidge, Engleheart, Hume and Nelson, all of whom have been honoured by having groups, or type sections, named after them.

Daffodils had become so popular that in 1884 the Royal Horticultural Society of Eng-

land organised a great conference in London, and a permanent committee was appointed to take cognisance of new varieties of daffodils and make suitable awards to the more meritorious. The daffodil craze was now on in earnest, and its impetus has increased continuously ever since. Scores of rival enthusiasts in Europe and Great Britain grow and cross daffodils and exhibit their flowers every year. Very high prices are paid for bulbs of particularly choice varieties, many of which cannot be purchased for less than ten dollars to twenty-five dollars per bulb, and a few of the very rare are worth as much as fifty dollars, and even one hundred dollars, per bulb.

More than that, there are some daffodils that may never be seen by the outside world, for a coterie of six wealthy daffodil lovers in England buys up the bulbs of any new variety of exceptional beauty and merit—if none have escaped into commerce—paying extravagant prices for the sole ownership of the coveted beauties, from $500 to $2,000 sometimes being expended by these enthusiasts for five or six bulbs. One of the compacts of

this close club is that at the demise of any member, his or her bulbs are to be distributed among the remaining members of the monopolistic band.

In practical America, the daffodil fever has not, as yet, reached so acute a stage. Old, standard varieties, costing from a dollar and fifty cents to ten dollars per hundred bulbs, generally satisfy the æsthetic tastes of our flower lovers. It is noticed, however, that some of the more progressive bulb importers are cataloguing a few of the newer and better kinds, and their answers to our inquiries indicate that there is a growing demand for choicer varieties, costing from fifty cents to one dollar per bulb.

At such prices, and even for much less, hundreds of beautiful varieties, creditable representatives from all type sections, are procurable, so that worthy collections may economically be made. Indeed, it is advisable to begin with moderate-priced varieties, for the higher points of the improved and more expensive sorts may not be fully appreciated at first by the uninitiated. But in a year or two the beginner is educated to note the

AN IDEAL PLANTING

Daffodils are most happily placed when grouped in clumps in the foreground of a mixed shrubbery border. Most varieties of the medium-crown type give satisfaction in all sort of conditions. (*Narcissus Barrii*, var. *conspicuus*)

THE IMPORTANCE OF MASSING

Plant each variety in masses by itself. By intermingling groups of the early, mid-season and late-flowering varieties, the brightness of the border can be extended over a period of three months. (*N. Emperor*)

points of superiority in the higher grades, and is led on to other indulgences.

THE NARCISSUS OF OLDEN TIMES

That narcissus, the ancient, small cupped and cluster-flowered sorts, were prized before history was recorded, is evidenced by wreaths of their flowers being unearthed from tombs made hundreds of years before the Christian era. That the popularity of narcissus increased with civilisation is indicated by old Greek and Roman writings. It is nearly 2000 years since Virgil's "Empurpled Narcissus" was penned, and about 1,500 years ago that Mohammed said "He that hath two cakes of bread, let him sell one of them, for bread is only food for the body, but narcissus is food for the Soul." Ovid, about the year I, poetically crystalizes an ancient legend of the birth of Narcissus, the substance of which is as follows: Narcissus, a beautiful youth, was so impervious to the loving advances of Echo and other suitors that Nemesis answering their prayers for vengeance, caused Narcissus to pine away in silent admiration of

his own image reflected from a mountain brook

"And looking for his corse we only found
A rising stalk with blossoms crowned."

MODERN DAFFODILS THREE HUNDRED YEARS OLD

The praises of daffodils—the trumpets—have been voiced only during the past three centuries by Spenser, Shakespeare, Tennyson, Wordsworth, Keats, and other poets. A good-sized volume might be filled with rhapsodical allusions and poetic descriptions from the various writers about daffodils, all indicative of the continued popularity of branches of the narcissus family, throughout centuries of time. Space, however, forbids our quoting more than the following classic lines:

"—Daffodils that come before the swallow dares
And take the winds of March with beauty."
—Shakespeare in *"Winter's Tale"*.

"A thing of beauty is a joy forever
————————and such are daffodils."
—Keats.

"I wander'd lonely as a cloud
That floats on high o'er vales and hills,
When all at once I saw a crowd,
A host, of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze.

"Continuous as the stars that shine
And twinkle on the Milky Way,
They stretched in never-ending line
Along the margin of the bay;
Ten thousand saw I at a glance,
Tossing their heads in sprightly dance.

"The waves beside them danced: but they
Outdid the sparkling waves in glee:
A poet could not but be gay,
In such a jocund company:
I gazed—and gazed—but little thought
What wealth the show to me had brought:

"For oft, when on my couch I lie
In vacant or in pensive mood,
They flash upon that inward eye
Which is the bliss of solitude;
And then my heart with pleasure fills,
And dances with the daffodils."

—William Wordsworth.

THE TYPICAL DAFFODIL AND NARCISSUS

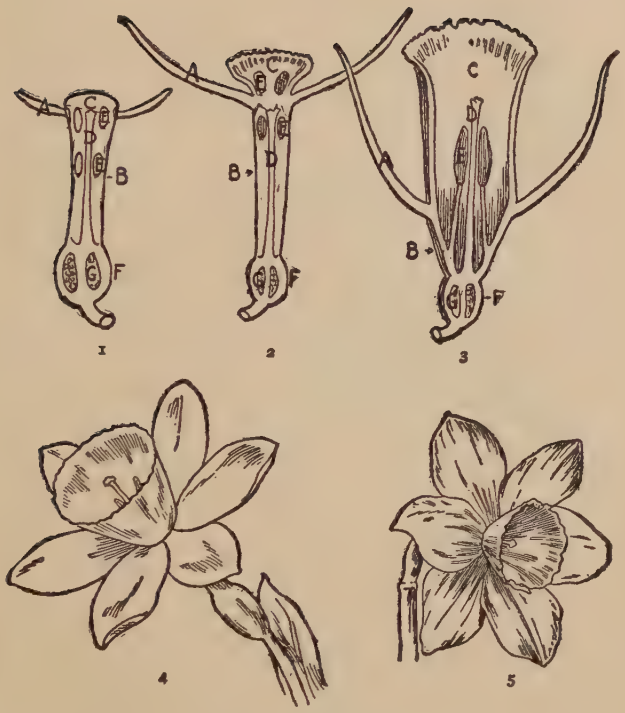
Though "Narcissus" is the botanical title of the whole family, the more showy large trumpet forms have so dominated that their popular name of "daffodil" has come to signify all the members of the family included in the large crown and medium crown sections, embracing the intermediate hybrid groups. The name "narcissus" is still retained popularly for the small-cupped species,

Narcissus poeticus, N. Tazetta and N. Jonquilla.

The relationship of the flowers can be best realized by looking at the diagrams in Plate IV. It will be seen that there is a considerable difference between the exterior form of the flowers as well as in their interior structure. From stem to mouth the flowers are practically of the same length, but the whorl of so-called petals*—perianth segments—is placed near the mouth in typical "narcissus" flowers so that there is only a shallow cup in front of it. In typical "daffodils" the whorl is placed near the base, allowing a longer portion called the "trumpet" in front.

There are also differences of interior structure. In the narcissus proper the stamens are in two series of three each, one set being connected to the tube near the top, the other lower down; in daffodils proper the stamens are in one series of six—all connected with the tube at one point nearly at its base. Prac-

* The term petals is used throughout this book to signify the perianth segments; it is more convenient and is easily understood.



TYPES OF FLOWER

The perianth segments (A) form a collar, as it were, that may be pushed away from or closer to the ovary (F) so that there is a definite ratio between the length of the tube (B) and the depth of the crown (C)

The sections:—(1) *N. Tazetta*, polyanthus; (2) *N. poeticus*, common narcissus; (3) *N. Pseudo-Narcissus*, trumpet daffodil. The stamens (C) are inserted in one series in (3), but in two series in (1) and (2). The pistil is indicated at (D)

Fig. 2 typifies the short crowned or saucer section

Fig. 3 is the typical long-crowned flower or trumpet daffodil

Fig. 4 is *N. Sprengeri*, a hybrid from *N. Pseudo-Narcissus* (2) and *N. Tazetta* (1)

Fig. 5 typifies the medium-crowned or cup daffodils, *N. incomparabilis*, produced by crossing *N. poeticus* (2) and a trumpet daffodil (3)

tically all narcissus of intermediate form between these two extremes are hybrids either natural or artificial between the two classes. For instance, *N. Tazetta* (Fig. 1) crossed with *N. Pseudo-Narcissus* (Fig. 3) has produced *N. Sprengeri* (Fig. 4). Again, *N. poeticus* (Fig. 2) crossed with *N. Pseudo-Narcissus* (Fig. 3) has produced *N. incomparabilis* (Fig. 5). As will be seen by a reference to the plate the hybrid in each case combines some characters from each of the parents.

CHAPTER II

Daffodils in The Garden Border

How a bulb grows—Soils and varieties—Planting depths and distances—Early planting—Lifting and dividing—Winter protection—The ideal mulch—Sunshine and shade—Blooms for three months—Cutting flowers—How to select bulbs.

All narcissus and daffodils are bulbous plants, and an understanding of the phases of a bulb's life will help materially in arriving at an intelligent system of cultivation. The bulb, the plant's thickened, underground storehouse from which the roots descend and the stems, leaves and flowers ascend, is fully formed by the growing plant *after the flowering period and before growth for the season is suspended,* and it contains within itself next year's flowers and foliage in embryo. In the thick, fleshy scales of the bulb is stored up a supply of food to support the new growth in early spring; these scales also serve as shields to protect the leaves and flower from injury, from cold or other external conditions.

The dormant period for these bulbs ranges from July to November, during which they may be dug from the ground, stored, and shipped around the world if desired. When replanted where soil and climatic conditions are congenial, the bulb develops leaves and flowers with as much luxuriance as if it had remained undisturbed in its original environment.

The bulbs of narcissus and daffodils vary greatly in size, according to age and kind. The Tazettas, or polyanthus narcissus, make the biggest bulbs, averaging from six to nine inches in circumference. Some groups, as triandrus, cyclamineus, Bulbocodium, etc., make full-grown bulbs not much larger than peas; while the great majority of our commonly grown narcissus and daffodils make bulbs of four to six inches maximum circumference.

SOIL PREFERENCES

With very few exceptions, the hardy narcissus and daffodils revel in coolness and a deep moisture-holding, air-penetrable soil,

overlying a pervious subsoil, and in partial shade. Though they will grow and flower most accommodatingly in any garden soil of average quality, yet they will do far better under more congenial soil conditions. Circumstances do not always permit us to provide these perfect conditions and we have to plan accordingly.

If there be a choice of several sites, it will be well to plant the different groups separately; the single yellow and bicolor trumpets in moderately moist but well underdrained loam; the poeticus types in heavier, damper, lower ground (particularly the double gardenia flowered form, alba plena, which will flower only when grown in heavy damp soil).

In warm climates the popular old "Double Daffodil" or Double Van Sion (*N. telamonius,* var. *plenus*) also requires a damp moist soil to retain its rich yellow colouring as on a dry light soil in a hot situation it is apt to produce greenish-yellow flowers, and in some cases, even, all-green flowers.

The drier soils or high ground will answer for the white trumpet daffodils; and the dry, sunny, well-drained hillside or rockery, with

warm exposure, should receive the Bulbocodium, cyclamineus and triandrus sections.

Although most of the important type groups of the narcissus family like cool, moist soil, yet it is essential that the moisture be not stagnant; that is, water must not remain continuously about the bulbs nor roots, but be drained away *from below*. "Wet feet" prevents maximum root development, and is apt, sooner or later, to cause "basal-rot" in the bulbs. Maintained moisture with abundant soil aeration is the ideal while the bulbs are in growth and flower.

The old idea that there is as much of the tree below ground as there is above is also approximately true of the narcissus and if the plant grows 18 inches high the roots penetrate the earth to approximately the same depth. It may be more practical to reverse this order of reasoning and say that if the roots can only forage six inches below the surface the growth of the plant and flowers above will be correspondingly small and stunted. The whole secret of success in producing the best, the largest, the most perfect and the richest coloured flowers and foliage is

maximum root development—and root development is entirely dependent upon congenial soil conditions. Your neighbour may buy and merely plant in his garden a few Glory of Leiden daffodils and get flowers three inches across, very handsome and thoroughly pleasing to him. You, knowing a little more of what that variety is capable of doing, and knowing how to prepare the bed, produce flowers five inches across!

PREPARATION OF THE SOIL

Where nature does not supply the ideal conditions, our aim must be to reproduce them as nearly as possible.

Light, dry, sandy or gravelly soils must be made heavier and more retentive of moisture. This may be done by manuring and then growing crimson clover, peas, or some "green crop" that can be dug under to decay and add humus, absorbent, sponge-like vegetable matter, to the soil. While this may be done in the spring so that the soil will be in fairly good condition by daffodil planting time in September, it will be far better to make the preparations a year ahead.

If previous preparation is not practicable, something may be done by starting two or three weeks before planting time. Remove the top soil to a spade's depth—six to eight inches—and work into the underlying soil to the depth of a spade, a two-inch layer of thoroughly rotted stable manure. Then replace the top soil. The object of using the manure is not so much to supply fertility as it is to assist in holding moisture, preventing its too rapid leaching. Under any other conditions, the use of stable manure for narcissus and daffodils the year of planting is not desirable unless it be put a considerable depth below the bottom of the bulbs. Under no conditions must the manure be mixed with the upper soil, or where it would be in contact with the bulb.

Year after year, until I learned to be more strict, I used to see here and there a sickly, yellowish-leaved, stunted daffodil plant. An examination of the soil almost invariably disclosed a lump of manure either in contact with the bulb or where its roots should have been, probably had been, but were destroyed by contact with raw manure. "No roots, no flow-

ers; poor roots, poor flowers; good roots, good flowers."

Heavy, wet clay soils need mellowing as a general thing, although some of the strong growing yellow and bicolor trumpet daffodils, and all of the poeticus and Burbidgei types will often make good growth and flower well for a time in heavy soil. Yet some plants eventually fail.

Underdrainage, either with tile or triangle-shaped board conduits placed three feet below the surface, and twelve to twenty feet apart, according to circumstances, is the corrective for wet, heavy soils. These drains are laid with a slight fall to an outlet, thus leading off the surplus water. The benefit of underdrainage is not only in drawing off surplus water, from below but also in opening the soil, allowing air to enter. The next best thing to underdrainage is subsoil plowing, or digging fully eighteen inches deep.

When previous manuring and preparation have not been done, use nothing but pure ground bone at the rate of two to four ounces on a square yard evenly strewn over the soil and dug in. Follow this by some high class

commercial fertilizer, rich in potash, at the rate of one to two ounces to a square yard just before leveling and raking.

On light, sandy soils, in addition, soon after the bulbs are planted, give sulphate of potash, about one ounce to a square yard. Potash in some form, even that contained in unleached wood ashes, deepens the colouring of the flowers and checks abnormal growth of plant and foliage.

PLANTING DEPTHS AND DISTANCES VARY

The stereotyped answer to the question, "How far apart and how deep shall I plant the bulbs?" is this: "Plant six inches apart and cover the bulbs three inches." While being approximately correct for the average growing varieties, the instruction requires modification to suit different soils, large or small growing varieties, and temporary or permanent plantings. Narcissus and daffodil bulbs vary as greatly in size as the plants and flowers they produce. Those of the Bulbocodium, triandrus, and one or two other groups grow no bigger than large peas, pro-

ducing small plants which may be grown three inches apart. Some full sized bulbs of other groups attain a circumference of six to eight inches, and make plants sometimes two feet high and of correspondingly large girth. These should be planted six to ten inches apart.

In light soils, plant deeper than in heavy soils. If planting only for the next spring's effect, with the intention of supplanting the daffodils with summer flowering plants, closer planting can be done than if the bulbs are to remain undisturbed for several years.

In my own garden, with average soil, I cover the bulb with a depth of soil fully equalling its largest circumference. This places the base of the great majority of bulbs (the poeticus, the trumpets, the incomparabilis varieties) about four inches below the surface of the ground. In lighter soils, this would be increased one-half. Deep planting is always safer, especially in cold, exposed localities; but deeply planted bulbs flower later than shallower planted ones. On the other hand, late flowers are often larger and have better substance than earlier flowers of the same variety.

That at least some narcissus will thrive when planted unusually deep was exemplified in a group of old-fashioned double daffodils, growing in the lower end of a hillside border which I had filled in during the fall when the daffodils were dormant and leafless and so forgotten. But they were not to be smothered with a covering of fifteen inches of soil and surprised us in the spring by blooming with unusual luxuriance, though about two weeks later than usual—and they have continued this performance for several years.

WHEN TO PLANT

Plant daffodils at any time between July and November and the earlier the better. The family is an exception to the generality of bulbous plants, and under natural conditions commences making new roots soon after the bulbs ripen, which, according to the earliness of the variety, is, in the latitude of New York, in June or July.

The poeticus types and their hybrids are especially resentful of being kept dry and dormant. When left in the ground they accept

no resting period but begin new root action almost before the old roots have matured.

Imported bulbs are not likely to be received before the middle of September, therefore it is well to have all preparations made in advance so that the bulbs can be planted at once. The more root growth made before winter, the larger the flowers. Late planted bulbs usually give fairly satisfactory results the next spring; but full-sized, characteristic flowers from late planted bulbs cannot be expected until the second spring, though bulbs lifted from the ground in July and at once replanted, will give maximum blooms the next season.

GARDEN PLANTING

Small bulbing daffodils, those making bulbs not larger than an inch in diameter, are quickly and easily planted with a garden dibber. This tool is thrust into the ground far enough to make a hole of the proper depth. It is then wiggled back and forth to enlarge the hole at the bottom, so the swollen base of the bulb may come in contact with the soil. If this is not done, the bulb

may "hang" midway down, leaving an air space below, which, if not actually detrimental, is certainly not good feeding ground for the young roots.

The bulbs of varieties too large to go in the holes made by the dibber are best planted with a trowel, by which a hole of proper size and depth is scooped out. After the bulbs are placed—whatever method of making the hole is employed—they are to be covered with soil which if not "sticky damp" should be pressed very firmly, by hand or foot, into contact with the bulb.

PLANTING IN TURF

Different methods of planting in sod ground are resorted to according to the difficulties encountered in making holes to receive the bulbs.

When the sod is sufficiently moist and soft, the quickest way is to use a spade handle sharpened dibber-like with a cross piece for a foot rest, fastened about 6 inches from the point. Another way is to thrust a spade or digging fork slantingly into the sod and soil, and raising the handle, thus lifting sod and

PLANTING IN THE HERBACEOUS BORDER

Make the outlines of the border groups irregular, also denser at one spot to focus the eye. The summer protection of the surrounding herbaceous plants helps to properly ripen the bulbs and also serves, in due season, as a winter mulch

THE POET'S NARCISSUS NATURALISED

The white poet's narcissus (*N. poeticus*) is one of the latest blooming varieties. It lasts well as a cut flower, and prefers heavier, damper, lower ground than the trumpet daffodils. At Highland Park, Rochester, N. Y.

soil so that one or more bulbs may be inserted in the cleft. Then pull out the spade and tramp the sod back into its former position. This will leave the bulbs in a slanting position, which seems to make no difference to their growth and flowering, the plants coming up just as straight as if the bulbs had been placed perpendicularly.

SAND CUSHIONS

In heavy ground, or low-lying situations, where an undue amount of moisture from melting snow or other causes keeps the soil continuously wet for weeks during the spring, place a handful of sand under and around the bulb of any rare and delicate variety, particularly the white trumpet daffodils. This will often prevent them from becoming diseased, as the sand allows the water to drain away from the bulb.

LIFTING AND DIVIDING

The natural increase by offsets of some varieties is so great that the second year after planting, the number of bulbs will be trebled.

But most sorts are not so prolific. Still, in time, varying from three to six years, according to variety, soil, and the distance apart the bulbs were originally planted, the clumps of plants will have become so crowded, and probably the soil so exhausted, or both, that fewer and smaller flowers will be produced. It is then time to dig up the bulbs, separate them and their offsets (young bulbs) and replant, either in fresh ground or in renewed soil in their old locations. This operation is called lifting and dividing.

The best time to do this, as a rule, is when the foliage has yellowed one-third down from the top, but some varieties, particularly those comprising the poeticus, Burbidgei and odorus groups, and possibly some others, should be lifted even sooner, for the reason that new root growth commences before the foliage has ripened down. In these cases the later lifting is injurious to the tender rootlets which are likely to die off, weakening the bulb and reducing the size of the next season's flowers, even if it does not prevent flowering altogether. Of course, if fully ripened bulbs can be immediately re-

planted, without the young roots being exposed to sun, air-drying or handling, the danger of injury will be lessened; but it is difficult to properly divide freshly lifted bulbs and their offsets on account of the adhesiveness of the soil and matting of wiry old roots. Therefore, it is considered good practice to lift early—better too early than too late—store the clumps in a cool, airy, shady place (preferably in trays) and there let them ripen and cure until the old leaves and roots are dry, when they are easily cleaned off and divided.

The actual work of "lifting" should be done by a spading fork. Never take a spade for this purpose, as the danger of cutting the bulbs is increased. Insert the fork a few inches from the clump, until the tines are completely buried. Work it from side to side and up and down to loosen the mass. Then incline the fork so that it will pass under the bulbs and the clump is removed.

"Dividing" is a term expressing the operation of separating bulbs held together by matted and intermingled roots and removing the offsets or young bulbs from the mother

bulbs. This is best done just before replanting. Do not remove any offset unless it is entirely detached from the mother bulb, with the exception of the union at the base. This may be cut through with a sharp knife if the variety is choice, though the common sorts are usually merely broken apart. Be sure not to cut or break through any other substance of the bulbs than the basal plate. Any surplus offsets which cannot be accommodated in the garden may well be used for naturalising in the grass.

Commercial growers dig and divide their bulbs every year, a practice that may be justified on a business basis, though I feel sure that the commercial stocks of some varieties would have better constitutions and produce bigger and stronger bulbs if these growers would dig and divide them only every second year.

WINTER MULCHING AND PROTECTION

During the summer, nature provides a mulch by covering the ground with weeds. We, in opposition, cultivate to kill the weeds

and in doing so—unconsciously perhaps—form a different mulch of cultivated soil, which breaks the capillarity of the soil, and prevents the sun's heat and drying winds from drawing up and dissipating the soils' moisture. The winter mulch while to some extent rendering the same service as a summer mulch, has additional duties; its object is not only to maintain an even underground moisture and temperature but also to prevent the surface soil from freezing too deeply, and —still more important—it must keep the frozen soil from thawing during unseasonably warm winter weather and early spring thaws.

The net result of these alternations of frost and thaw is "heaving," by which the surface soil is lifted and broken apart. Thus shallow-planted bulbs are often lifted and torn from their fall made roots which are anchored in the lower layers of soil. The winter mulch then holds together the soil and its contained bulbs and should not be removed until settled spring weather justifies it.

In the wild, nature provides the mulch. When naturalised in grass, the leaves and

stalks of the grass ripen, bend over or break, and finally settle down, forming an ideal blanket, giving both warmth and airiness. In shrubberies, the fallen leaves accomplish the same result. Nature's mulch is lightened by the winds of March and the balance is reduced by decay. In garden culture, it is not practicable to follow these gradations in covering and uncovering. The best that we can do is to cover, or mulch, as soon as the surface of the ground is frozen to a crust, not before, and to remove the mulch in the spring after hard freezing weather is over—before the growth of the bulbs has penetrated the mulch sufficiently to prevent its removal without injuring the young top growth.

THE BEST KIND OF MULCH

I have used several materials for mulching my bulbs and have seen still other materials used by others. The answer to the question "What is the best mulch" depends largely on what is available. The one direct lesson from nature is warmth, with air. In Holland the water rushes are used and they are

ideal, but they are not always available. I have a friend who grows narcissus and daffodils, in cold, bleak, northerly exposed, hillside ground, who uses a six-inch covering of forest leaves, and usually with great success. These are held in place by a few branches of trees. Towards spring this leaf blanket settles down to a compact mass about four inches thick, which in a less exposed and warmer location would give too much warmth and induce too early growth. In warm situations possibly a four-inch covering of leaves would answer well.

I have generally used strawy manure and with success when the winter has held steadily cold and kept the ground frozen until the manure could be removed before any bulb growth had penetrated it. But, sometimes, the manure covering has given disappointment, as when prematurely warm spells have brought up an early growth which came in contact with the manure. This condition prevailed in the spring of 1906. As the plants developed, there were irregular streaks of sickly yellow leaved plants throughout the beds. I could not account for this as I knew

the beds were well drained and the soil properly prepared, and the bulbs had been planted early. Mr. De Graaff, the well-known daffodil grower of Holland, was a visitor that season and soon convinced me that the whole source of trouble was with the manure covering. A fungus seemed to have run through it and had attacked the young growth of the narcissus; in some cases traveling down the leaves to the bulbs and even to the roots. He said: "Use no more manure. If you cannot get reeds or rushes, try sphagum moss or cocoanut fibre refuse." A three-inch layer of cocoanut fibre refuse is light and airy, retains an even degree of moisture and is sufficiently warm. It is an ideal cover. It costs five dollars per ton at any factory where cocoa mats and such things are made though of course there is a freight charge to be added.

Salt meadow hay makes an excellent covering, and even ordinary straw and hay may be used. Put it on four to six inches thick, according to the coldness of the latitude and the exposure. Should any of these harbor mice, there is little likelihood of their doing any damage if the covering is put on, as it

should be, after the surface of the ground has frozen to a hard crust.

In the spring, as soon as the ground is workable, after the winter covering has been removed, stir the soil with a narrow rake, hand fork, or prong weeder, to break up the hard-packed surface and so enable the plants to come through easily. If this is not done where the soil is heavy the growths will lift whole chunks of the surface soil and the pressure often causes the leaves and flower stalks to become crooked or otherwise deformed.

GROUPING IN GARDENS

Daffodils are most happily placed when growing in clumps in the foreground of a border of mixed shrubs and herbaceous plants. The shrubs supply sufficient shelter, and shade at all times, and the herbaceous plants grow up and hide the ripening daffodil foliage as is begins to get unsightly. Here the bulbs may remain undisturbed to flourish and increase for several years, or until a reduction in size and quantity of flowers indicates a too crowded condition, exhausted soil, or

both. Where that occurs, lift the clumps, divide and replant, as before explained.

Plant each variety by itself in irregular colonies of from twelve to twenty-five bulbs, each group in a little bay with a background of greenery; in the next bay, plant a colony of some distinct type that flowers either earlier or later, and so on. Such an arrangement brings out the full beauties of the varieties, prevents any inharmonious clashes, and by intermingling the early, mid-season and later flowering varieties, a long succession of bloom may be enjoyed in all parts of the border.

Daffodils may also be bedded out like hyacinths and tulips, and very effectively too. Yet they never appear so beautiful as when colonised in the mixed border.

RELATION TO SUNSHINE AND SHADE

The largest and most richly colored flowers are those grown in partial shade, although most varieties (particularly those having flowers of thick substance) do well when exposed to the full sun. Their flowers last longer when protected to some extent, from the heat of the noonday sun. This can be

provided by shrubbery, overhanging limbs of trees, etc. All white flowered varieties, and even the bi-colour or white winged trumpets are particularly grateful for some shade; and the rich colouring of the new red-orange rimmed crown varieties is only retained when the flowers are shielded from the sun. If necessary cut the flowers when about half open and allow them to develop in water, in a cool shaded place. This is a factor that the American amateur should consider when studying the latest European lists, as I have learned from experience. I bought some new sorts described in terms such as "perianth showy white, cup rich golden yellow, broadly edged with brilliant scarlet," etc., and paid two dollars for each bulb, but could not at first make the colouring of the cups support the description. Eventually I learned that my failure was caused by my own lack of knowledge, and now all choice, highly coloured, and white daffodils are grown under a shade of tobacco cloth.

This is a sort of coarse meshed, strong cheesecloth that comes just one rod wide and is fastened on wire runners carried on top

of posts eight feet above the ground. Sufficient sunlight filters through for perfect development of flowers and colouring and moreover it makes an agreeable shade for anyone to study the flowers. Other advantages of this protector—which is put on just as soon as the mulch is removed—are tempering late frosts and breaking the force of heavy rains, thus preventing the bearing down of tall flower stalks and splashing with dirt. The cloth may be rolled up and put away for another season just as soon as the plants are through flowering, thus permitting the full sunshine to accomplish its work of thoroughly ripening the foliage and bulbs. If we want good flowers the succeeding season, the plants must have abundant light and sun to complete their growth. In hot Australia and New Zealand daffodil amateurs make lath houses and cover the tops with tree boughs.

BLOOM FOR THREE MONTHS

With a proper selection of types and varieties embracing extra early, early, mid-season, late and extra late sorts, the "time of the daffodil" may be extended in the open ground

over a period of three months; but only where a variety of locations is available, influenced by depth of planting, and assisted by depth and retention of mulch.

To accomplish this, we need consider only the varieties flowering at the two extremes of the season. The "come-betweens," comprising, at a rough guess, 75 per cent. of the genus, will supply an abundance of bloom throughout their normal periods and we need therefore consider them no further now.

What we need to do is to make some of the extra earlies flower still earlier and some of the extra lates flower still later than normal. A choice of locations—early and late grounds—is the main necessity; the other contributory essentials we have under our own control.

To appreciate the difference between early and late grounds, take note where the snows always melt first—there the sun lingers longest and it is "early ground" compared to where the snows melt last, which is usually on the north or shade side of a clump of shrubbery, fence or hedge. This will be the "late" ground. The difference in time between

these melting snows will indicate how much the normal daffodil flowering season may be extended. By putting some bulbs of your extra earlies in the early ground, mulching but lightly and removing same early, and by planting some extra lates in the late ground, covering deeply, say with six inches of soil, and retaining the mulch as long as possible, the desired result is assured. This fact was brought forcibly to my notice by accident soon after I commenced growing daffodils, although at that time my garden area was only a 20x30 foot yard. The bed on the south side of the fence was fully three weeks earlier than that on the north side, and bulbs of the same variety, planted on both sides, commenced flowering three weeks apart.

When one's enthusiasm in daffodil culture leads to experiments in crossing types and raising new seedlings, one will want to cross varieties that may flower one or more weeks apart. By reversing the directions just given and planting the late sort in the early ground, and the early sort in the late ground, one can bring the two in flower simultaneously so that they may be hybridized without resorting to

the more troublesome method of forcing the late sort into flower under glass.

CUTTING THE FLOWERS

When flowers of narcissus and daffodils are to be cut for house decoration or for shipping, they should be taken when partially open, almost in the bud state. If the stems are then at once placed in water in a cool shaded place, the flowers develop larger and more richly coloured than they would have done if allowed to expand on the plant; and they also last longer.

In vasing daffodil flowers, their own foliage usually harmonises better and sets them off better than any other greenery. But do not for this reason cut the foliage of choice varieties, for it is needed by the plant to assist in properly ripening and storing up the succeeding season's flower. Use foliage from the more abundant commoner kinds, and it will be equally effective.

SELECTING THE BULBS

For garden planting or for pots or forcing where flowers of maximum size and quality

are desired always choose "top" bulbs or the best bulbs the variety produces; but for permanent plantings and naturalising the smaller younger and cheaper "seconds" may be used. In selecting bulbs for "Exhibition flowers," an expert will choose the largest old "single crown" bulbs, which give larger but fewer flowers than the "double crown" or "mother bulbs."

As different varieties of narcissus and daffodils make bulbs varying from half an inch to eight inches in circumference, it is difficult for us to tell how to select the largest old single crown bulbs of all varieties without making the following explanation of their manner of growth.

Specialised types (varieties) of narcissus not seedlings, are increased by offsets, the latter being produced by the "breaking up" of the mother bulb. These offsets attain full growth and vitality usually in about four years. The next year probably these bulbs will develop into the "double and triple nose" form (two or more bulbs in one skin). They then are "mothers" and the succeeding year will probably break up.

A FEW GOOD BULBS

There are marked differences in form and size of the bulbs of different members of the narcissus family. The largest bulbs are found in the polyanthus or *N. Tazetta* varieties (shown on the right). On the left is a good average "top" bulb which will produce one flower. The "double nosed" bulb shown in the centre can be counted on to produce two flowers Always buy bulbs that are heavy in comparison to size and which are solid and firm on pressure

For water culture in the house, grow Chinese Sacred Lily. It will flower in six weeks and can be forced for Christmas. The water should be nearly up to the bulb

The trumpet and the medium-crown daffodils for indoor flowering are best planted in soil and grown in pots. They require from ten to twelve weeks to root

DAFFODILS FOR THE WINDOW GARDEN

It is at the maximum single crown age, just before entering the "mother" stage, that the bulbs should be chosen for maximum flowers. Bulbs bought from a reliable dealer will probably be of just the right age, unless his price is considerably less than the average price of other reliable dealers, when it is more than probable that his bulbs are a year or two younger. If it is possible to examine the dealer's stock of bulbs, look out for a few "double nosed" bulbs as their presence indicates the age of the crop and shows that the "singles" among them have attained maximum size and age in single crown formation.

Another thing to be considered is health. This is indicated by solidity, weight and skin. Bulbs solid and *weighty for their size* are most likely in perfect health and vitality. To test any, press lightly between thumb and fingers both base and neck and if either feels soft and giving or "spongy" examine more carefully. Should any basal rot be found reject the infected bulbs to prevent dissemination of the disease. Or if the bulb be of a choice variety it may be planted away from the healthy ones. A handful of sand below

and about an invalid bulb permits the water to drain away and the bulb may recover.

Look for a clean, shiny skin, indicating freedom from any fungus, although a rough skin, though suspicious, does not necessarily mean a diseased bulb.

CHAPTER III

Flowering Daffodils in Winter

Important factors—The best soil and its preparation—Getting bulbs early—How to order—August planting—Pots and potting—Pans or pots—What plunging does—The ash packing—Danger from heat—Importance of good roots—Forcing into bloom—What to do after flowering—Varieties.

It is an easy matter to grow narcissus in the house and have some varieties flower by Christmas, and from that time both narcissus and daffodils may be brought into flower in increasing variety and quantity until spring.

The growing plants need occupy no space in the window garden, or conservatory, excepting while in bud and blooming, and their flowering period may be hastened or retarded at pleasure to keep up the succession. For earliest blooms the earlier flowering varieties of the Tazetta group are grown, particularly Paper White and Double Roman; these are often in flower even earlier than Christmas.

Successful winter flowering is dependent upon four factors:

1. Early planting. Procure the bulbs as early as possible and pot up at once.

2. Plenty of time to root thoroughly out of doors. Allow about twelve weeks for hardy varieties and six weeks for tender Tazetta varieties.

3. Slow growth when first brought into the house, giving ventilation and keeping the room or house cool: 50° until budded, then 60° to 65° for flowering.

4. Plenty of water when the buds are developing and when in flower.

MAKING A GOOD POTTING SOIL

The ideal potting soil for daffodils is prepared six months or more before using. It should be sod taken from rich loamy land. Make your "mould pile" by first putting down a layer of inverted sod, and then covering this with a layer of old manure—cow manure, thoroughly rotted, is the best. Over this spread a layer of leaf mould. Proceed in that way with another layer of inverted sod, etc., until the required quantity is stacked. This should be in the proportion of 50 per cent. loam sod, 25 per cent. manure, 25 per

cent. leaf mould. Compost this by turning the pile three or four times during the season to get all ingredients thoroughly mixed. Before using, add about four quarts of sand and two quarts of fine bone meal to a bushel of the mould.

If it is too much trouble for an amateur to prepare the soil as directed, it would be better to buy prepared potting soil from a florist, than to rely on the ordinary garden soil. Of course, it will be necessary to add the sand and bone meal just the same. The next best thing, if, for some reason, soil prepared in advance by yourself or the florist is not available, is to lift some sod, tear it apart, shaking out the soil and allowing the small pieces of fibrous grass roots to remain in it. Add bone meal and sand as in the other case, *but omit manure.* This last injunction is of paramount importance.

IMPORTANCE OF AUGUST POTTING

Too much emphasis cannot be put on this: get your bulbs as early as possible and pot at once.

A general order for daffodil bulbs sent to the bulb dealer will not be filled in the usual course of things until he can complete the order and so ship the whole lot at one time—that is, after the arrival of the Dutch, English, Irish and Guernsey bulbs, which means that you get your bulbs about the middle of September. Be emphatic, therefore, in giving instructions to ship the bulbs "as they come in." The purchaser then receives early in August, the South of France and Asia Minor bulbs including Paper White, Double Roman, and two or three others of the older Tazetta varieties, as well as three or four varieties of the old standard trumpet sorts—probably Spurius major, Golden Spur, and Emperor. Be very chary about accepting any Double Van Sion from these sections as they are apt to produce flowers with some or much green in them. It is just possible that the bulb dealer will also have a shipment in July or early in August of a few sorts of home grown bulbs from Virginia, probably Golden Spur, Emperor, Empress, Barri conspicuus, poeticus, and ornatus.

With a start of even half a dozen varieties

in August, and the arrival of the European varieties in September, it is perfectly easy to have a grand show of narcissus and daffodils all winter from Christmas on. The object of getting the bulbs potted early is to give them plenty of time to "make root"—three months is none too long—for remember that without good roots, good flowers cannot be produced even from the best bulbs.

POTS AND POTTING

I prefer to use five or six inch pots with several bulbs in each. The large potful not only gives better and more pleasing results, but is easier to manage than a small pot. One Golden Spur daffodil may be grown and flowered successfully in a four-inch pot, but it requires more watching and care, is more susceptible to changes of moisture, etc., than three or more Golden Spurs in a six-inch pot. In other words, it is better to suit your bulbs to the pot than to suit the pot to the bulb. An inch of space between the bulbs in a pot is ample.

In the case of small-bulbing varieties, such as the Bulbocodium, triandrus, and cyclami-

neus groups, a dozen or more bulbs may well be grown in a five or six-inch pot. On the other hand, the big-bulbing Tazetta varieties can only go one bulb to a six-inch pot. The great majority of the trumpet and crown daffodils can be planted 3 to 5 bulbs to a six-inch pot. Plant only one variety in a pot; different varieties of different heights and not flowering simultaneously give an unsatisfactory result.

The pots to be used must be washed clean, if old ones; and if they are new, soak them thoroughly in water so that the pots themselves will not dry out the soil after potting. Before putting in the soil, provide for good drainage by placing two or three pieces of broken pots over the hole in the bottom of the pot, to prevent it from getting stopped up. Cover this drainage with a small layer of sphagnum moss, cocoanut fibre refuse or old fibrous roots that have been shaken out of sod; then fill in with soil until, when it is shaken down and a bulb set on it, the top of the bulb is almost up to the top of the pot.

Place the requisite number of bulbs in position, and fill in with soil to within half an

inch of the top (this much space being needed for watering). A little of the neck of each bulb will remain exposed, excepting in the case of the very small pea-like bulbs of miniature varieties, which should be covered with soil to a depth of about half an inch.

If earthen pans are used, the procedure will be the same as for pots. Eight-inch pans make ideal receptacles and when the plants are in flower look better than pots. Shallow boxes (flats) are used when flowers are to be grown in quantity for cutting. This is discussed in detail in Chapter V.

AFTER POTTING COMES "PLUNGING"

The secret of success in flowering bulbs is to make them develop roots before top growth starts. The object of "plunging" potted bulbs out of doors is to induce them to do this by keeping the lower portion of the bulbs warmer than the top. Failure to do this is responsible for most disappointments in growing and flowering bulbs under artificial conditions. Without roots the flower can only develop as far as the stored up nutriment in the bulb will sustain it; and, as the bulb's

supply of food is generally exhausted before the flower is half grown, nutrition supplied by the roots then becomes essential. It is easy to understand, therefore, that growth ceases if no roots are at work and the stunted plant becomes a monument to incompetent treatment.

There are various ways of plunging the potted bulbs; my method, and the one that I think most nearly fulfils the requirements of nature, is to dig a trench in the garden a foot deep in some location sheltered from the north and west, and where water will not flow into it. A three-inch layer of coal ashes is placed in the bottom of the trench for drainage and to prevent worms from entering the pots. The pots or pans of bulbs are then placed closely together on the ashes and the interstices filled with soil, the trench being filled in to a little above the level, and the surface rounded over to shed water. Here everything is as conducive to root action and deterrent to top growth as if the bulbs were planted in the garden in the regular manner. When the surface of the ground is frozen to a crust, a layer, three or four inches deep, of

salt hay, straw, or leaves is put over all.

Another way is to set the pots on the surface of the soil (on ashes) in a shady part of the garden, hold them together with a board frame and fill in around and over with ashes, leaf mould, tanbark or sand. Some growers stand the pots on the floor of a cool, airy cellar, or place them in a cold pit or cold frame. All of these methods are successful; but I prefer and always follow the trench method.

The hardy bulbs, potted and plunged as advised will be sufficiently rooted in twelve weeks' time and some of the early sorts may be ready a week or two sooner. Most Tazetta varieties root more quickly, Paper White and Double Roman especially, these usually being ready in five to six weeks' time.

If left in the plunge, all the bulbs will rest without making much, if any, top growth, the entire winter. Advantage is taken of this fact, and by lifting a few pots at intervals, and holding the remainder in storage, a continuous succession of bloom throughout the winter is maintained.

The time required for forcing into bloom after the bulbs are brought into house heat,

varies from three to five weeks according to the variety. Before taking in the first lot of potted bulbs for forcing, make a careful examination to see if the pots are filled with roots, and do not take the pots indoors unless they are. The only way to do this is to "knock out" one potful of bulbs. Place the palm of the hand over the top of the pot, invert the pot and tap the edge lightly on a box or board. The ball of earth will slip out of the pot, intact, into your hand. If the bulb is well rooted, the surface of the earth ball will show a network of white roots. If only two or three roots are visible and the earth is inclined to fall apart, the bulb is not well rooted and is not ready for forcing. The examination completed, slip the pot back over the ball of earth, turn the pot right side up, press the top slightly to make all firm again, and replace in the plunge.

FLOWERING TIME, AND AFTER

When the well-rooted potted daffodils are taken from the "plunge" they must not at once be placed in warmth, but brought up to it progressively. Too much heat is apt to

expand the flower prematurely so that it cannot pass the neck of the bulb; or, if it does get through, the developing bud will be strangled by its unopened sheath. In other words, it "blasts."

First, place the potted bulbs in a temperature of 45 to 50 degrees, either in cold pit, cold frame, azalea house, cold greenhouse, light cool garret, or cellar. Here the young growth—probably blanched from its covering in the plunge—will gradually turn green and grow slowly, but sturdily. At this stage, and thereafter until through flowering, water freely; and once a week give manure water the strength of brown tea or soluble commercial fertilizer dissolved in water, one tablespoonful to a gallon.

If the flower stems and buds keep pace with the foliage in growth, the treatment is correct; if the foliage is outstripping the flower stems, it is proof of too much heat. When both foliage and flower buds are in an advanced stage of development, the plants may be removed to their sunny flowering quarters in the window, conservatory, or greenhouse. For the best health of the plants at this time,

the temperature should not exceed 60° and the atmosphere should be fairly moist. In a higher temperature and dry air, the flowers sooner wither.

AFTER FLOWERING

Bulbs that have been forced into flower in the winter are usually thrown away, especially the cheaper sorts; still if the variety is choice, or prized, the plants may be saved. This is accomplished by growing them on in a cooler temperature until the foliage has ripened—about six weeks after blooming—then turn the pots on their sides, withhold water, and in another month remove the bulbs from the soil, cutting off dead leaves and roots, and store in a cool place until the time to plant in the garden in July or August. In a year or two such bulbs will have recuperated sufficiently to be again forced, but they cannot be forced two years in succession.

VARIETIES FOR WINTER FLOWERING

Practically all types and varieties of narcissus, daffodil, jonquil, etc., may be successfully

DAFFODILS FOR POT CULTURE AND FORCING BY SECTIONS

Section	Season	Low Priced Popular Varieties		Moderate Priced Choice Varieties		High Priced Fancy Varieties	
LARGE TRUMPET All yellow Varieties:	Extra early	*spurius major	$ .35 doz	*Golden Spur	$ .50 doz	Excelsior	$1.00 doz
	Early	rugilobus	.35 doz	M. J. Berkeley	1.00 doz	Capt. Nelson	2.50 doz
	Mid-season	*Emperor	.60 doz	Eliza Turck	1.50 doz	John Nelson	5.00 doz
	Late	P. R. Barr	.50 doz	Glory of Leiden	2.00 doz	Hon. Mrs. Jocelyn	10.00 doz
LARGE TRUMPET Two coloured Varieties:	Early	*Horsfieldi	.50 doz	*Victoria	1.00 doz	Mrs. M. Crossfield	20.00 doz
	Mid-season	*Empress	.60 doz	Mrs. W. T. Ware	1.00 doz	J. B. M. Camm	2.00 doz
	Late	Ada Brooke	.50 doz	Mme. Plemp	2.00 doz	Weardale Perfect'n	5.00 each
LARGE TRUMPET All white Varieties:	Extra early	cernuus	1.00 doz	tortuosus	2.00 doz	Colleen Bawn	4.00 doz
	Early	*albicans	.75 doz	Mrs. Thopmson	1.00 doz	Princess Ida	2.00 doz
	Mid-season	Wm. Goldring	1.00 doz	C. W. Cowan	1.50 doz	Apricot	7.50 doz
	Late	Mrs. Camm	2.00 doz	Mme. De Graff	7.50 doz	Mrs. Vincent	20.00 doz
INCOMPARABILIS	Early	*Sir Watkin	.50 doz	Queen Catherine	2.50 doz	Mars	5.00 each
	Mid-season	stella superba	.75 doz	Princess Mary	1.00 doz	Constellation	5.00 doz
	Late	Beauty	.75 doz	Commander	2.00 doz	Gloria Mundi	10.00 doz
LEEDSII	Early	Grand Duchesse	.60 doz	Madge Mathew	1.50 doz	Princess Maud	15.00 doz
	Mid-season	Minnie Hume	.30 doz	Beatrice	1.50 doz	Mountain Maid	10.00 doz
	Late	*Mrs. Langtry	.30 doz	Duchess of Westm'r	1.50 doz	Katherine Spurrel	12.00 doz
BARRII	Early	Orphée	30 doz	Dr. Fell	3.00 doz	Sea Gull	12 doz
	Mid-season	Marian Barton	.30 doz	Maurice Vilmorin	1.50 doz	Crown Prince	2.00 doz
	Late	conspicuus	.50 doz	Flora Wilson	1.00 doz	Dorothy Wemyss	5.00 doz
NELSONI	Late	Nelsoni major	.50 doz	Mrs. Backhouse	.75 doz	Resolute	9.00 doz
BURBIDGEI	Early	Mary	.30 doz	John Bain	.50 doz		
	Mid-season	Falstaff	.30 doz	Ellen Barr	.50 doz	Firebrand	20.00 doz
	Late	Little Dirk	.50 doz	The Pet	1.50 doz	Rosalind	15.00 doz
ENGLEHEARTII	Late	Seaquin	3.00 doz	Thisbe	12.00 doz	Pole Star	3.00 each
POETICUS	Mid-season	poeticus præcox	.50 doz			Chaucer	10.00 doz
	Late	*poeticus ornatus	.25 doz	King Edward VII.	1.50 doz	Glory	20.00 doz
DOUBLE	Early	*incomparabilis fl. pl.	.25 doz	*Double Van Sion	.50 doz	Golden Rose	2.00 doz
	Mid-season	Orange Phœnix	.40 doz	Silver Phœnix	1.00 doz	Primrose Phœnix	3.00 each
POLYANTHUS white		Scilly White	.30 doz	*Paper Wt. g'florus	.50 doz	White Perfection	1.50 doz
yellow		Lord Canning	.75 doz	Sir Isaac Newton	1.00 doz	Adonia	1.50 doz
bi-colour		*Double Roman	.30 doz	Grand Monarque	.75 doz	Bazelman Major	2.00 doz

*These varieties are the ones generally forced by florists.

DAFFODILS FOR POT CULTURE AND FORCING BY SEASON

Season of Bloom	Section	For Popular Use (Low Priced)		For Choice Flowers (Medium Priced)		For Fancy Flowers (High Priced)	
Extra early (Late Nov. and Dec.)	Large trumpet, yellow	*spurius major	.35 doz	*Golden Spur	.50 doz	Excelsior	1.00 doz
	Large trumpet, white	cernuus	1.00 doz	tortuosus	2.50 doz	Colleen Bawn	4.00 doz
	Polyanthus, white	Scilly White	.30 doz	*Paper Wt. gflorus	.50 doz	White Perfection	1.50 doz
	Polyanthus, yellow	Lord Canning	.75 doz	Sir Isaac Newton	1.00 doz	Adonia	1.50 doz
	Polyanthus, w. & y.	*Double Roman	.30 doz	Grand Monarque	.75 doz	Bazelman Major	2.00 doz
Early (Dec. and Jan.)	Large trumpet, yellow	rugilobus	.35 doz	M. J. Berkeley	1.00 doz	Captain Nelson	2.50 doz
	Large trumpet, bi-col.	*Horsfieldi	.50 doz	*Victoria	1.00 doz	Mrs. M. Crossfield	20.00 doz
	Large trumpet, white	*albicans	.75 doz	Mrs. Thompson	1.00 doz	Princess Ida	2.00 doz
	Incomparabilis	Sir Watkin	.50 doz	Queen Catherine	.50 doz	Mars	5.00 each
	Leedsii	Grand Duchess	.60 doz	Madge Matthew	1.50 doz	Princess Maud	15.00 doz
	Barrii	Orphée	.30 doz	Dr. Fell	3.00 doz	Sea Gull	12.00 doz
	Burbidgei	Mary	.30 doz	John Bain	.50 doz		
	Double	*incomparabilis fl. pl.	.25 doz	*Double Van Sion	.50 doz	Golden Rose	2.00 doz
Mid-season (Jan. and Feb.)	Large trumpet, yellow	*Emperor	.60 doz	Eliza Turck	1.50 doz	John Nelson	5.00 doz
	Large trumpet, bi-col	*Empress	.60 doz	Mrs. W. T. Ware	1.50 doz	J. B. M. Camm	2.00 doz
	Large trumpet, white	Wm. Goldring	1.00 doz	C. W. Cowan	1.50 doz	Apricot	7.50 doz
	Incomparabilis	stella superba	.75 doz	Princess Mary	1.00 doz	Constellation	5.00 doz
	Leedsii	Minnie Hume	.30 doz	Beatrice	1.50 doz	Mountain Maid	10.00 doz
	Barrii	Marian Barton	.30 doz	Maurice Vilmorin	1.50 doz	Crown Prince	2.00 doz
	Burbidgei	Falstaff	.30 doz	Ellen Bart	.50 doz	Firebrand	20.00 doz
	Poeticus	præcox	.50 doz			Chaucer	10.00 doz
	Double	Orange Phœnix	.40 doz	Sulphur Phœnix	1.00 doz	Primrose Phœnix	3.00 each
Late (Feb. and March)	Large trumpet, yellow	P. R. Barr	.50 doz	Glory of Leiden	2.00 doz	Hon. Mrs. Jocelyn	10.00 doz
	Large trumpet, bi-col.	Ada Brooke	.50 doz	Mme. Plemp	2.00 doz	Weardale Perf'n	5.00 each
	Large trumpet, white	Mrs. Camm	2.00 doz	Mme. de Graaff	7.50 doz	Mrs. Vincent	20.00 doz
	Incomparabilis	Beauty	.75 doz	Commander	2.00 doz	Gloria Mundi	10.00 doz
	Leedsii	*Mrs. Langtry	.30 doz	Duchess of Westm'r	1.50 doz	Katherine Spurell	2.00 doz
	Barrii	conspicuus	.50 doz	Flora Wilson	1.00 doz	Dorothy Wemyss	5.00 doz
	Nelsoni	Nelsoni major	.50 doz	Mrs. Backhouse	.75 doz	Resolute	9.00 doz
	Burbidgei	Little Dirk	.50 doz	The Pet	1.50 doz	Rosalind	15.00 doz
	Engleheartii	Sequin	3.00 doz	Thisbe	12.00 doz	Pole Star	3.00 each
	Poeticus	*ornatus	.25 doz	King Edward VII.	1.50 doz	Glory	20.00 doz

*Those marked thus are the most generally popular varieties for cut flowers.

flowered in pots, pans or boxes during the winter if the cultural instructions previously given are carefully followed; but some kinds are much more responsive to forcing than others. If any are to be ruled against, it would be the late and extra late sorts (those marked E and F in the Descriptive Lists of varieties on pages 112 to 207). These are quite difficult to force, yet with a maximum time allowance for rooting and by growing cool—absolutely without bottom heat—even these may be brought into flower in March or April, but not in winter. The varieties marked * in the Descriptive List are especially suitable for winter culture in pots.

For the convenience of the reader, a tabular selection from the forcing varieties is given on pages 59 and 60. The varieties named embrace first class representatives from all sections, including early, medium, and late flowering varieties, to maintain an unbroken succession of bloom. These are in three grades, popular, choice, and fancy, so that the pocketbooks of all may be suited. It will, however, be noted that in the "fancy" no mention is made of rare new hybrids that are held at

prices that are prohibitive so far as the average buyer is concerned.

In addition to those named in the tables there are a number of small and miniature flowering kinds that force most easily: Bulbocodium, (all varieties); capax plenus (Queen Anne's double daffodil); cyclamineus (cyclamen flowered); Johnstoni Queen of Spain; the jonquils; juncifolius; Macleaii (Diomedes minor); triandrus (Angel's tears), all varieties; and trumpet minimus. Plant these small growing narcissus 12 to 18 bulbs one-half inch apart in a pot or pan of suitable size, putting only one variety in the pot.

CHAPTER IV

Water Culture in the House

No soil to make dirt indoors—How much water?—Starting in the dark and bringing into light—The "blast"—Culture in plain water, sand, or moss fibre—Chinese sacred lily—Trumpet daffodils in hyacinth glasses—Feeding.

For parlour and library or any place where there is more or less danger of damage to carpets and furniture from overflow watering of potted plants, the method of growing bulbs in glasses of water, bowls of pebbles and water, and moss or fibre and water has much to recommend it. The ladies of the family usually find much pleasure in growing a few flowers in this way and the early varieties can easily be made to bloom by Christmas time.

Whatever the method adopted, the procedure is substantially the same in all cases. The vessel holding the bulb and the water is put into an airy cool cellar, garret, storeroom, or cold pit, in dim light—not into a close confined closet—and kept there until

the bulbs are rooted. The time required is five to six weeks for the polyanthus varieties, and ten to twelve weeks for the hardy varieties. By this time, the tops will also have grown an inch or two. At this stage, remove to a light room with a temperature of about 40° to 50° for two or three weeks or until the growth and buds are prettty well developed, when the plants may be placed where they are to be used for their decorative effect.

The object of starting the growth very cool at first and reaching warmth by progressive degrees is to have the bulbs first make roots, and then a sturdy growth and produce flowers of greater substance and lasting qualities. Too much warmth, especially at first, induces long, limp leaves and is apt to cause the flowers to "blast," i. e. fail to open the sheath.

Daffodils may be successfully grown in glasses by using ordinary hyacinth glasses filled with soft or rain water, not quite touching the bottom of the bulb. A lump of charcoal in the bottom assists in keeping the water sweet. Replenish the water as evaporation reduces the quantity and change entirely every week or two, or whenever there is an

indication of its getting stale. A pinch of some soluble plant food, purchasable at seed stores, in each glass of water once a week while the plants are in bud and blooming will be of great benefit.

Probably any of the early flowering daffodils may be grown in this way but the following trumpet varieties have proven well adapted: Henry Irving, Golden Spur, Horsfieldi, Victoria, and Double Van Sion.

THE CHINESE SACRED LILY IN WATER

Varieties of the polyanthus section, especially the so-called "Chinese Sacred Lily" give very beautiful results when grown in glass bowls filled with pebbles and water. The pebbles are used merely to support the bulb. Use shallow bowls, place a little granulated charcoal in the bottom to keep the water sweet, and cover with a one-inch layer of bird-gravel or sand. Set the bulbs on this nearly touching one another, three or more to a bowl, according to size. Fill in with white pebbles, or, if they are not available, more bird-gravel. This will prevent the plant from toppling over when in leaf and bloom. Pour in water

until it almost reaches the bulbs. Place in a cool spot to root, and grow on in a low temperature as advised in the preceding pages. Replenish the water as it evaporates and occasionally change if it shows any signs of getting stale.

Some of the early flowering trumpet daffodils may also be grown in this way, but the kinds of narcissus almost infallibly successful are the Tazetta varieties, especially gloriosa, Grand Soleil d'Or, Grand Monarque, Maestro, Paper White, and particularly the Chinese sacred lily, the latter coming into bloom the quickest of any, often in six weeks from planting.

By making an incision just through the skin across the bulbs of the Chinese variety and about an inch from the top of the main bulb, it will liberate an additional lot of leaves and flowers. By this method one bulb will often bear eight to twelve spikes of bloom.

FIBRE OR MOSS AND WATER

This is perhaps the best and most successful of all methods of water culture. Use bowls, pots, or jardinieres without holes.

To prepare the medium, take one part of cocoanut fibre—or if that is not available, sphagnum moss—and add to it one pint of granulated charcoal and one quart of washed sand or bird-gravel. Mix thoroughly. It will probably be necessary to tear the fibre or moss to pieces to accomplish this. Place about two inches of this material in the bottom of the jardiniere, put the bulbs on it, nearly touching one another, and fill in with more material, making all quite compact, but do not jam too tight. Leave only a portion of the necks of the bulbs exposed. Water to thoroughly moisten the fibre all through; and turn the vessel on its side until all surplus water has drained off.

Rooting can be done in any cool, airy room; and, for the rest, follow the directions given in the preceding paragraphs. The fibre must never be allowed to get dry—neither must it be so freely watered that it becomes soggy, at least not until the plants are in bud and blooming, during which period they will stand more water.

As stimulating food for the bulbs grown by the moss and water method a little weak

manure water the strength of brown tea may be used, but I prefer the soluble plant food tablets on sale at the seed stores. They are clean, odourless and quickly dissolved in warm water. Dissolve one tablet to a gallon of water and give each pot a tablespoonful of this solution once a week.

All hardy varieties previously recommended for pot culture, and all of the half-hardy polyanthus varieties, may be grown in fibre or moss and water—preference being given to the early and mid-season flowering kinds.

Some English amateurs have been most successful with the method. A report of a daffodil show at Bideford states: "Especially noticeable were Mrs. Hobhouse's six trumpet daffodils, grown in moss fibre—Golden Spur, Empress, Mrs. Thompson, Victoria, princeps, and albicans. These were a mass of bloom, containing over 100 fully-developed flowers, size and quality leaving nothing to be desired, while the foliage was perfect. The best pot of daffodils in the show, and which deservedly won the silver medal, was grown by Miss Farrington, and had

twenty splendid flowers of Sir Watkin. The whole pot was as sturdy as if grown in the open and in the most congenial soil. This shows what can be done with moss fibre."

CHAPTER V

The Commercial Production of Cut Flowers

The florist's special requirements—Economy of bench space—Making flats—Burying in the open—Temperatures—When to water—Feeding and stimulating—Profitable forcing varieties—Causes of failure—A new industry—Daffodil cut flower farms—Field culture in the South—Preparation of the ground—Shipping the flowers.

The florist whose sole object is to produce during winter, under glass, a large quantity of high quality flowers in a small space with the minimum of labor and expense grows his daffodils in "flats." The cultural details in this case, however, do not differ materially from those already described in Chapter III, though here the routine of handling is more specialised.

FORCING IN FLATS

Flats are shallow boxes or trays about four inches deep and of a size approximating 12 to 18 inches, though the actual size should

be such that they may be placed on the greenhouse bench without loss of room. A flat of the dimensions given will hold 36 to 48 bulbs, according to size, allowing a space of from 1-2 inch to 1 inch between bulbs, which is sufficient. The reason for using flats is to economise space, enabling one-third more bulbs to be grown to a square foot of bench than could be done in pots or pans. The flowers produced in flats are exclusively for cutting and they are nearly as good as those produced in any other way.

The flat should have a few holes or a couple of slits or cracks in the bottom to permit free drainage, these openings being covered with moss, fibre, or the fibrous roots from old sod to prevent soil from washing out. Put over this an inch of the prepared soil and set in the bulbs, using, of course, only one variety to a flat. Fill in with more mould to within half an inch of the top of the flat; give a good watering if the soil is dry and place —preferably—in an uncovered frame. Finally cover the flats with old leaf mould, ashes, tanbark, or soil to a depth of three or four inches.

The buried flats or boxes are now to remain without any further attention, not even watering, until the bulbs are thoroughly rooted, which will require: for the Paper White and early flowering Tazetta varieties from five to six weeks, and for the hardy varieties, the trumpets, etc., from ten to twelve weeks. The earlier the normal flowering time of a variety the quicker it roots.

BRINGING INTO WARMTH

When the bulbs are well rooted the mulching is removed and the flats taken into a cold shed, cold greenhouse, or pit with a temperature of from 45°to 50°, and kept there until the foliage has grown somewhat and the buds are well up. From here a few flats are taken at different intervals, when a succession of bloom is desired, into the greenhouse or conservatory, for flowering. Even here a temperature of from 60° to 65° is high enough for the best flowers. The early flowering Tazetta varieties can stand a slightly higher temperature with some loss of substance only; but the later flowering and hardy varieties will in all probability fail to develop their

flowers—"go blind," as it is termed, in a high temperature.

As soon as the flats are brought indoors, watering must be attended to carefully, espe- blooming. At this stage of growth daffodils will consume great quantities of water and a meagre supply is sure to result in poor flowers, if not in absolute failure. A moist atmosphere should be kept in the greenhouse to assist the flower sheaths in opening, in fact an occasional good syringing is advisable for this very purpose. In the open air, the wind and rain, and the movement of the plants assist in opening the sheath and in preventing its drying up and strangling the enclosed flower. Manure water diluted with water to the colour of weak tea, applied once a week (about a pint to a flat), will materially assist in the production of large, well-formed flowers.

Bottom heat must not be given. Some varieties, particularly those of the poeticus family, or in which the poeticus blood predominates, resent heat. Even though well rooted, they cannot be forced beyond their limit. A case in point: A well-rooted batch of poeticus or-

natus was brought into heat too quickly and the top growth simply stood still—it would not budge with six weeks of forcing. The grower finally in disgust threw the flats out of doors where the bulbs encountered the rigours of frost and snow, but with the advent of spring weather developed plump buds and later splendid flowers. This will emphasise the vital importance of making haste slowly when forcing the naturally late-flowering kinds. A good rule to keep in mind when forcing hardy narcissus is: Temperature 40° for roots, then 50° until the buds are through the necks, then 60° to 65° for best and most substantial flowers and foliage, 70° to 80° to rush growth and bloom with loss of substance and danger of going "blind."

VARIETIES FOR FLAT CULTURE

All the undermentioned varieties (page 75) will "force." It is understood that the early flowering varieties can be held back to flower later than the time specified; but the late-flowering sorts cannot safely be brought in bloom before the time mentioned. Some of

DAFFODILS FOR FORCING IN FLATS

Type and Colour	Early To Flower Dec. and Jan.	Mid-season To Flower Jan. and Feb.	Late To Flower Feb. and March
Polyanthus—white	Paper White grandiflorus		
Large trumpet—yellow	Golden Spur Henry Irving spurius major	Emperor rugilobus	Glory of Leiden P. R. Barr
Large trumpet bi-colour	princeps (poor substance) Victoria	Empress Horsfieldi	J. B. M. Camm Mme. Plemp.
Large trumpet—white	tortuosus	albicans Mrs. Thompson	Mrs. Camm Mme. de Graff
Medium trumpet—yellow	Sir Watkin	Frank Miles stella superba	Beauty Barri conspicuus
Poeticus—white			poeticus ornatus
Double yellow	Double Van Sion		Orange and sulphur Phoenix

the varieties named may be a little too high priced for general commercial work; but will be found beautiful for private use where quality, irrespective of cost, is more considered.

While the forcing into early bloom is a comparatively easy matter for the experienced commercial grower and well-informed private gardener, yet there are others to whom success is not always assured. Their failures are usually traceable to neglect of some one or more of three things: 1st, early planting; 2nd, cool treatment (45° to 50°) until the buds are well through the necks; 3rd, plenty of water and a moist atmosphere while in bud and bloom.

FIELD CULTURE FOR MARKET FLOWERS

Within the last few years a new industry has been developed in the United States, the growing of daffodils under field culture for the production of cut flowers for market. Though yet in its infancy, there does not seem to be any reason why this industry should not attain considerable proportions. There are three establishments of this kind of which

PAPER-WHITE NARCISSUS AS A PARLOUR PLANT

It may be grown in bowls of water like the Chinese Sacred Lily and can be had in flower before Christmas if potted in August and brought into the light as soon as rooted (six to eight weeks)

A flat measuring 12 x 18 x 14 inches will accommodate three to four dozen bulbs. Water thoroughly and place under cover, either in a frame or buried in the open ground under light soil or salt hay until rooted. Polyanthus varieties root in six weeks; trumpet varieties in ten to twelve weeks.

After rooting, take the flats into a cold shed (temperature 45° to 60°), keeping them there until the foliage and buds are well up. From this cold shed they can be brought in for forcing as required, in a temperature of 60° to 65°

COMMERCIAL CULTIVATION IN FLATS

I have personal knowledge, and probably there are others.

The pioneer daffodil farm is near Petersburg, Va., a second started up near Portsmouth, Va., and the third is situated a few miles southeast of St. Louis, Mo.

It is significant that these three daffodil farms are situated in practically the same latitude; not too far south for the well doing of hardy daffodils, and yet not so far north but that their open ground flowers can be produced sufficiently early to compete—especially for Easter trade—with the daffodils forced under glass in the North. These farms commence to cut flowers in March.

A FLOWER "FARM"

The soil of the Petersburg daffodil farm is ordinarily good "corn ground," a long cultivated sandy loam. This was manured heavily and plowed. A subsoil plow followed in the furrow to break the hardpan and open the subsoil, mole-track like, to a depth of eighteen inches. A crop of cowpeas was grown on the land and plowed under in the fall. The next

spring this ground was again plowed and harrowed, leaving the soil in a fine mechanical condition—a rich deep sandy loam, with moisture holding humus.

Planting is done in July and August, the bulbs being dropped four to six inches apart in furrows plowed out six inches deep. Five or six furrows, one foot apart, constitute a bed, and the beds are separated by a three-foot walk. These walks are for the convenience of the flower gatherers, affording a convenient place to set the baskets, preventing injury to the plants. In early winter a top dressing of strawy manure is placed over the beds and is allowed to remain as the growers think that longer stems are thus produced.

The first spring after planting only a fair crop of medium-sized flowers is produced—possibly because the more expensive, large-sized, bulbs are not planted. But the second year after planting, and for three or four years more, great quantities of long-stemmed flowers are gathered. About the fifth or sixth year after planting the bulbs become crowded as a result of natural increase and the flowers they bear are smaller and less salable.

Consequently they are dug up, separated, and replanted in fresh ground.

GATHERING WITH LONG STEMS

The flowers are gathered when only about half open for they develop quickly after they reach the customer and the stems are put into water. As long stemmed flowers are demanded in the markets, the stems are pulled as long as possible, not cut nor broken off.

As the flowers are gathered in the field they are stood up in baskets, and carried to the packing shed where the stems are placed in tubs of water, to absorb moisture and freshen up the flowers. Girls now pick them out, one by one, tieing them in bunches of twenty-five. The bunches are long, flat, and one sided, a layer of two or three flowers, then an under layer, and so on, every care being exercised so that the flowers are not bruised or broken. The bunches are then packed for shipment in light, wooden boxes,—paper lined, to retain a moist atmosphere—and sent by express to various city flower markets.

Very many varieties may be grown under field culture for cut flowers, but naturally the

expensive, newer, large-flowering hybrids cannot be used with profit, for the bulbs must be planted by the thousands. So long as the flowers are of good-size with long stems, all varieties seem to bring the grower about the same average price, 50c. for a hundred flowers, though early in the season they often realise double that figure or more; but late in the season the return is much less. For this reason the old reliable medium-priced standard sorts mentioned below are chosen. These, well grown, produce large marketable flowers on long stems, and the different kinds furnish succession of bloom for two months or more.

DAFFODILS FOR CUT FLOWERS OUTDOORS

Type	Name	Season
Large trumpet, yellow	Henry Irving	Early
	rugilobus	Early
	Golden Spur	Early
	Double Van Sion	Early
	Emperor	Mid-season
bicolor	Horsfieldi	Early
	Victoria	Early
	Empress	Mid-season
Medium trumpet, crown, or cup	incomparabilis Sir Watkin	Early
	incomparabilis Autocrat	Mid-season
	stella superba	Mid-season
	Barrii conspicuus	Late
	Leedsii Dutchess of Westminster	Late
	poeticus ornatus	Late

CHAPTER VI

Naturalising in the Grass

The lesson from nature—Where to plant—How to colonise in meadows—Where delicate kinds flourish—Methods of planting—Hardy varieties naturalised in New England—The Tazetta in Bermuda—What to Plant.

"Naturalising" is a most effective method of planting daffodils. By this term I mean planted broadcast in quantity in field, meadow, open woodland or the wilder portions of the estate, and left alone to flourish and spread along natural lines. All the hardy daffodils may be naturalised, the wild types doing the best while the larger flowering modern hybrids are likely to "run out"; that is to say, they may lose their size, and deteriorate toward the parental types.

The effect of the daffodil blooms mingling among the grass is one that cannot well be described in words. The army of graceful flowers nodding and waving with the breeze is entrancingly beautiful. The greater the quantity used, the more the pleasure derived.

It is the collective view of the mass that attracts and not a close analysis of the individual flowers.

The naturaliser should make his plantings simulate nature's distribution of plants. Do not plant bulbs evenly over the field, in serried ranks, but take double handfuls of the bulbs and, as it were, scoop them out over the surface of the ground in irregular masses, planting them where they fall, dense in one place, thin in another. Scattered in this way, they grow with a natural effect which is little distinguishable from the handiwork of Nature herself.

COLONIZING IN MEADOWS

In the meadows of England the Double Van Sion, or *N. telamonius* var. *plenus,* covers acre upon acre.

Colonies may be established wherever there is a bit of grassland that need not be mown before the end of June, for narcissus leaves must not be cut before the bulbs are thoroughly ripe if flowers are desired the next season. The charm of a mass of daffodils in flower is often enhanced when it is opened to our view

in unexpected places. A colony in flower with a background of sombre tree-trunks is contrastingly effective, a group on the bank of a stream, pond or lake with reflections of the flowers mirrored in the water is entrancing. A pocket of soil beneath some boulder on the hillside enlivened with daffodils will be a gem. Dozens of locations will suggest themselves to those who catch the spirit of planting daffodils to simulate nature's plantings. But only those who have seen narcissus and daffodils naturalised can fully appreciate their wealth of beauty, creating a picture not unlike a cloud of gold and silver butterflies resting on the turf—yet ever restless, nodding and fluttering.

THE MATTER OF SITE AND SOIL

Naturalising is so universally successful because the bulbs when grown thus are not so particular as to soil as when grown under garden cultivation. Planted in grass they are in an ideal home; the turf is sweet and free from manure, the soil's moisture and temperature are more evenly maintained, and, moreover, the grass-roots bind together the

upper and lower strata of soil, rendering the bulbs less susceptible to the tearing of alternate freezing and thawing, and the winter mulch or protection of dead grass is better than what we can supply under artificial conditions; therefore it is not to be wondered at that many delicate varieties often thrive for years under these conditions but die out after a season or two in the garden.

At the same time, if a variety of soils and situations are available, choice should be made to suit variety to soil. Thus, on the heavy, moist, lowland, plant the poeticus and odorus families and on the high land, with lighter soil, the white trumpets which revel in checkered sun and shade. Almost any situation will answer for the other classes; viz: the all-yellow and bi-colour trumpets, and varieties of the incomparabilis, Barii, Burbidgei and Leedsii groups. In moist, heavy soils daffodils increase by offsets and then grow in clumps. In harder ground the increase is mostly from seed and the plants grow singly.

ART IN GROUPING

If group planting is followed, never mix

two varieties, but plant each kind by itself. It is quite permissable and indeed very effective to plant two or three groups, early, mid-season and late-flowering sorts, in proximity so as to keep up a longer display of bloom. Arrange the groups or collections of groups so there will be a liberal breadth of grass between to act as a foil. Plant the bulbs with a bounteous hand—about six inches apart—not less than twenty-five bulbs of one kind to a group— though 100 to 1,000 will be better if the area of ground permits. Arrange the groups with irregular outlines, having a dense patch, not necessarily at the centre, as a focus point for the eye; no circles, no squares, no rows, and no two groups alike.

Another method of natural planting, especially suitable for borders and shrubbery, is in dense, irregular clumps. Old plantings of bulbs will often take on this character, and in truth, as the influence of time is felt, irregularity of distribution with heavy, dense masses irregularly outlined here and there, is the ultimate disposition. This effect is due to two prime causes of planting in natural, or unprepared soil; namely, that certain bulbs find ex-

ceptionally congenial situations, while others are set in spots absolutely uncongenial and consequently die.

HOW TO PLANT BULBS IN TURF

The bulbs are most quickly planted when the ground is soft after a rain. I then use a spade handle, sharpened dibber-like. A cross piece, mortised in and securely bolted about eight inches from the point, serves as a foot rest to assist in thrusting the dibber in the earth. Working the handle a little enlarges the hole at the bottom large enough to receive the base of the bulb which should be about six inches below the surface. After dropping in a bulb, fill in with a handful of soil. The bulb will thus have a covering of soil three to four inches deep.

Another method that is quite expeditious and satisfactory is called "notch planting." A sloping cut is made with a spade, the turf and soil being pried up and held by a man while a boy places two or three bulbs in the cleft. The turf is then tramped back firmly. The bulbs in this style of planting lie inclined

on their sides, but it does not seem to make any difference for the growth comes up straight above the surface.

VARIETIES FOR NATURALISING

For naturalising in lawns which have to be cut in May the following extra early flowering miniature daffodils may be utilised: trumpet minimus, cyclamineus, moschatus (Spanish), trumpet minor and capax plenus. They make a beautiful picture when in flower against the green grass carpet, and will be sufficiently matured not to be injured for the next season's blooming if the grass is not mown before May.

TRUMPETS IN NEW ENGLAND

There is an impression in some quarters that the trumpet daffodils cannot be naturalised as far north as New England, but Mr. John Parkinson, of Boston, is said to have large groups of Emperor and Empress planted twenty years ago on his country estate, at Bourne, Mass. At the Ames Estate, North

SOME SUITABLE VARIETIES FOR NATURALISING IN GRASS

Type	Early Flowering		Mid-season		Late Flowering	
Large trumpet yellow	Golden Spur	$4.00 hun	†Emperor	$3.00 hun	*abscissus	$2.00 hun
	*obvallaris	3.00 hun	M. T. Berkeley	4.00 hun	†P. R. Barr	3.00 hun
	*spurius major	2.50 hun	rugilobus	2.00 hun		
Large trumpet bicolor	princeps	2.00 hun	Horsfieldi	3.00 hun	*Cabeceiras	3.00 hun
	*Scoticus	2.00 hun	*pseudo-narcissus	1.50 hun	Grandee	2.00 hun
Large trumpet white	*moschatus	4.00 hun	Albicans	4.00 hun	Mrs. Camm	10.00 hun
	*pallidus præcox	3.00 hun	Mrs. Thompson	5.00 hun	Wm. Goldring	5.00 hun
Incomparabilis	†Sir Watkin	2.50 hun	Autocrat	2.00 hun	†Beauty	4.00 hun
	Titian	2.00 hun	†stella superba	4.00 hun	Goliath	4.00 hun
Leedsii	Amabilis	2.00 hun	Dchess de Brabrant	1.50 hun	Mrs. Langtry	2.50 hun
	Grand Duchess	3.50 hun	Minnie Hume	2.00 hun	Mme. de Graaff	4.00 hun
Barii	Orphée	2.00 hun	Maurice Vilmorin	4.00 hun	†conspicuus	2.00 hun
Nelsoni					Nelsoni major	2.50 hun
Burbidgei	†John Bain	2.50 hun	Falstaff	2.50 hun	Agnes Barr	2.50 hun
Poeticus	poeticus præcox	3.50 hun	ornatus	1.50 hun	recurvis	1.00 hun
Jonquil	†rugulosus	2.00 hun	†Dutch Campernelle	1.50 hun	*Heminalis	7.50 hun
Double flowering	incomparabilis fl. pl.	2.00 hun	Orange Phœnix	3.00 hun	†albus plenus odora-	
	Double Van Sion	2.00 hun	Sulphur Phœnix	5.00 hun	tus	2.00 hun

*Thrive best in partial shade. Suitable for banks along streams.

Easton, these varieties, together with princeps and Golden Spur, are naturalised in a spot where the soil is always quite damp; they have now been planted seven years and show a gratifying increase, but it is noted that the smaller white flowered Leedsii varieties increase faster than those of the large trumpets. On the other hand, Mr. E. O. Orpet at South Lancaster reports that he finds that the trumpets do better where the soil dries out during the summer resting period of the bulbs.

In warm climates, the Tazettas or polyanthus narcissus will naturalise and spread like weeds. On the island of Bermuda one of these charming varieties has escaped from cultivation and has become as firmly established as any wild native. In this congenial climate there are narcissus flowers from December to July. The residents assert that these narcissus have been growing in the same places "since they could remember."

CHAPTER VII

Miniature Daffodils For The Rock Garden

Little gems that would be lost in the border—Mountain species to grow only in rock pockets and special soils.

There are a number of dainty little-flowered members of the daffodil family, of perfect form, that if planted in the garden and border would be practically lost to sight, yet they are gems when grouped, a dozen or more of a kind, two to four inches apart, in the soil pockets of a rockery. In fact, some of these "tiny tims" were found wild in the fastnesses of mountains, growing in the crevices of rocks in little pockets of gritty soil and they do not seem able to live in cultivation unless in a properly built rockery—or rock garden—with well-drained soil pockets leading clear to the surface of the ground—filled in with gritty, peaty, soil and positively no manure. They thrive to perfection under suitable conditions and increase for several years. If a

MINIATURE FLOWERED DAFFODILS SUITABLE FOR ROCKERIES.

Name	Description	Season	Height	Soil	Situation
Bulbocodium conspicuus	Yellow Hoop-petticoat	Late	6 inches	Moisture	Foot of rockery
Bulbocodium citrinus	Citron Yellow ditto	Mid-season	6 inches	Moisture	Foot of rockery
Bulbocodium monophyllus	White ditto	Early	6 inches	Sunny dry nook	Sunny dry nook
capax plenus	Queen Anne's double lemon daffodil	Early	7 inches	Sandy loam	Half sand
cyclamineus	Yellow cyclamen flowered daffodil	Early	6 inches	Moist loam	Partial shade
juncifolius	Miniature jonquil — rich yellow	Late	3 to 4 in.	Gritty, drained soil	Partial shade
Macleaii	Miniature bicolor, white with yellow trumpet	Late	4 inches	Sandy loam	Partial shade
moschatus (of Spain)	Miniature white trumpet	Early	6 inches	Sandy loam	Checkered sun
triandrus albus	"Angel's Tears"—white	Mid-season	7 inches	Drained, gritty soil	Partial shade
triandrus calathinus	"Angel's Tears"—large white	Mid-season	7 inches	Drained, gritty soil	Partial shade
triandrus concolor	"Angel's Tears"—large yellow	Mid-season	7 inches	Drained, gritty soil	Partial shade
trumpet minimus	Miniature trumpet—yellow	Early	3 inches	Peaty soil	Partial shade
trumpet minor	Small trumpet—all yellow	Early	7 inches	Sandy loam	Partial shade

low growth of alpine plants, hardy mosses or even short fine-leaved grass can carpet their nests, the bulbs seem to last longer; moreover, such a mulch keeps the rain from splashing dirt on to the flowers, and, peeping through the green, they present a picture in the spring far out of the ordinary.

All those named in the adjoining table are adapted to rock-culture, the special requirements of each being given in the last column.

COMMERCIAL PRODUCTION OF CUT FLOWERS

The flats of rooted bulbs are removed into a cold greenhouse or shed with a temperature of 45° to 50°, and later into a warmer greenhouse with a temperature of 60° to 65° for flowering (the polyanthus varieties can stand a slightly higher temperature)

A FLAT OF FLOWERS READY FOR CUTTING

The florist simply cuts the flowers and foliage close to the ground and does not bother to save the bulbs for a second year

CHAPTER VIII

The One Insect and One Disease

The daffodil amateur has a happy lot in the matter of diseases and insects. No green fly to suck the juices, no host of invading bugs to chew up the results of the year's work; nor are there rusts or anthracnose that must be sprayed with poisons. The daffodils flower and ripen their foliage before any of the everyday pests of the garden are awakened for the season. And after that, even, they are comparatively safe, for the bulbs are usually distasteful to moles and mice, which turn to them only when all else fails; and foliage nor plants are not relished by either browsing animals or by birds.

Daffodils may not be immune, however, for the sparrows have made a start. In the spring of 1906, I noticed for the first time that a few of the earliest daffodil flowers were being nipped by these birds. Incidentally the variety was Early Bird. Daffodil salad evidently was not to their liking,

for the little pieces torn from the flowers were found scattered about nearby. After tasting the flowers for a day or two, they left them alone for the rest of the season.

THE BASAL ROT DISEASE

The one serious pest of the daffodil is a fungous disease, "basal rot," a sort of dry rot which starts at the base, and, working up through the centre of the bulb, soon destroys it. To a casual observer the exterior of the affected bulb (with the heart and centre entirely eaten away) may appear to be in perfect condition. A bulb so infected cannot be cured and should never be planted for fear of spreading the disease.

Before planting bulbs of varieties that are especially liable to basal rot, they should be carefully examined. Press each bulb firmly near the base, between the thumb and forefinger. A really sound, healthy bulb is firm, hard and unyielding. On the other hand, if it is soft and yielding, it is suspicious. These soft bulbs should not be planted near healthy stock. If a pinch higher up the bulb still develops a yielding softness, the presence of

basal rot well advanced is almost positively indicated. In such a case do not hesitate, take no risks, but destroy the bulb at once; and destroy means "burn."

The disease is favoured by heavy wet soils, highly manured soils and cold seasons. The remedy is to replant the bulbs in drier, warmer, higher ground, or in raised and better drained beds.

Fortunately all sections of the family are not equally liable to the disease and those most subject to basal rot are the white trumpet varieties; it sometimes attacks the Leedsii, jonquil and Tazetta groups, but only rarely does it attack any others.

THE NARCISSUS FLY

I am very glad to say that I have had no personal acquaintance with the narcissus fly (Merodon equestris). Indeed it does not seem to have done much, if any, damage in the United States. Possibly our winters are too cold for the fly which hails from southern climes. In England and Holland, however, this pest seems to have become acclimated and is doing considerable havoc among the

daffodils, and we in America may not long be immune from its attacks. Having had no actual experience with the fly, I quote in substance from European authorities: Dr. J. R. Bos of Holland, and Rev. W. Wilks of England:

"The narcissus fly—nearly one half inch long and with wings expanded one inch across—is not unlike a small 'bumble-bee' though having only two wings and no sting. It hovers over the daffodil plants not unlike a humming bird, its wings moving as swiftly as it poses in one place for a minute or two—then suddenly it darts with lightning speed usually to the right or left, seldom straight ahead—making a sound between a shriek and a whistle, though of course, not so loud—yet great compared with the size of its author. It then settles down among the daffodil leaves and lays its eggs near the top of the bulb. It will probably lay 100 eggs at different times during its season from May to July. The eggs seem to hatch quickly, the little grubs finding their way in to the bulb when their destructive work commences. There they live on the tissues and heart of the bulb until autumn

when they eat their way out and hibernate in the ground in chrysalis form until spring when the fly hatches out and begins its annual cycle."

Imported bulbs of the lower priced cheaper grades may be to some extent infected. A blackish spot the size of a pin's head near the shoulder of the bulb is suspiciously indicative that a grub has entered. If a similar and larger spot is found near the base of the bulb your suspicions are likely to be well founded, for it is customary for these grubs to make the second hole as an outlet for the frass.

Of course, to be on the safe side, you will destroy infected bulbs with their inhabitants and this is not any sacrifice, because only healthy bulbs will give perfect flowers. Where the flies do appear they are trapped on plates containing thick molasses in the centre with edges smeared with honey to attract them.

Of course, there are some other minor diseases and troubles, but their total result amounts to practically nothing. As affecting the gardener, for whom this book is written they may be ignored, and so are dismissed with this bare reference.

CHAPTER IX

Straightening Daffodil Nomenclature and Classification

Up to a hundred years ago, when there were comparatively few kinds or varieties in this now numerous family, the old system of naming—always descriptive—answered admirably; but, with the advent of numerous intermediate types, perhaps combining the distinctive forms of both parents, and so to be classed with neither, something else became imperative. The old name "Pseudo-Narcissus albus aureus," signifying the large yellow trumpet daffodil with white perianth petals, could now be applied to a dozen or more varieties, each one of which has a distinct individuality. After several fruitless efforts had been made to straighten out the nomenclature by retaining the old Latin names, light was at last shed by Mr. J. G. Baker, in 1869, whose arrangement of the genus into three main sub-divi-

sions stands to-day. These are respectively magni-coronati, medio-coronati, and parvi-coronati, wittily interpreted into "long-nosed" "short-nosed" and "snub-nosed," now commonly spoken of as trumpet, cup and saucer.

(Editor's Note: These three popular terms are introduced as being entirely logical and descriptive. The word "crown" that has sometimes been used to indicate the entire medio-coronati sub-division, is inadequate since it is a translation of part of the Latin designation of all three sub-divisions.)

Baker's arrangement with a few modifications received official approval at the Daffodil Conference of the Royal Horticultural Society held in London in 1884. The matter of future nomenclature was solved by the adoption of the following resolution:

RESOLVED: "That in the opinion of this conference, uniformity of nomenclature is most desirable, and that garden varieties of narcissus, whether known hybrids or natural seedlings, should be named or numbered in the manner adopted by florists and not in the manner adopted by botanists."

Under this ruling all recent varieties are given English names, the Latin titles being retained for the old species, sub-species and wild hybrids.

To a very great degree, the botanical subdivisions of the family agree with the garden

groups and they are conveniently considered in that light.

The genus Narcissus has species of two distinct types of foliage: flat-leaved, which characterises the trumpet daffodils as well as the poet's and Tazetta narcissus; and the rush-leaved, which is found in jonquils, and which are thereby pretty well isolated into a distinct garden group.

For the practical man's convenience, in the following chapters, the garden, or horticultural significance of the types and sections has been considered, rather than their exact botanical sequence, and the varieties are listed according to these artificial but practical garden groups as follows:

GROUP I.—THE GIANT-TRUMPET OR AJAX DAFFODILS

Embracing all the one-flowered varieties having a cyclindrical, or funnel-shaped trumpet at least three-quarters as long as the petals, which are spread horizontally, or are inclined forward; not deflexed. These again are subdivided as follows:

A. Yellow Ajax; self yellow varieties derived from wild flowers of yellow *N. Pseudo-Narcissus.*

B. White Ajax; white petals and white or sulphur trumpets; descendants from *N. moschatus* and the Pyrenean form, *N. pallidus praecox,* both of which are marked sub-species of *N. Pseudo-Narcissus.*

C. Bicolor Ajax; yellow trumpets and white petals; hybrids of the two preceding groups.

GROUP II.—THE LESSER TRUMPETS

Here are included two sections, Backhousei and Humei, both of which, botanically considered, belong with the trumpet daffodils, but for garden purposes are separated from the Ajax group, partly on account of size as they are both comparatively smaller.

N. Backhousei, hybrid of Ajax and *N. incomparabilis.* The trumpet often is as large as the petals and the crown itself often unflared, giving it a tubular appearance. There is considerable difficulty in the exact placing of this section, it being sometimes considered among large trumpet daffodils and at other times as belonging to the intermediate, or medium-crowned group which is composed entirely of hybrid forms between the first and third of Baker's classification.

N. Humei and its varieties ("Dog-Eared Daffodils") are garden hybrids between *N. Pseudo-Narcissus* and *N. incomparabilis,* flower drooping and petals inclined forward. In other respects the flowers of this section agree with Group I.

GROUP III.—THE HOOP-PETTICOAT DAFFODILS

A very distinct group, with conspicuous, wide-flaring trumpets and insignificant petals but the same colour as the trumpet; stamens deflexed, which does not occur in any other group; leaves rush-like.

All varieties of *N. Bulbocodium* (sometimes spoken of as *N. Corbularia*).

GROUP IV.—CYCLAMEN-FLOWERED DAFFODILS

This is an artificial group, but is well marked from the horticultural standpoint, because the petals in the three sections which comprise this group are reflexed. All have comparatively large trumpets.

A. *N. cyclamineus*; the yellow cyclamen-flowered daffodil (sometimes considered to be a sub-species of yellow Ajax). Sharply reflexed petals, so that the petals and trumpet form one continuous line; leaves flat.

B. *N. Johnstoni;* Johnston's cyclamen-flowered daffodils. Wild hybrids between an Ajax variety and the following, *N. triandrus.* The flowers of this group are similar to those of the large trumpet varieties with

the exception of having reflexed petals; flat leaves.

C. N. triandrus; white cyclamen-flowered daffodil, or "Angel's Tears"; two or three flowers to a stem. White with petals well reflexed; flowers small; leaves rush-like.

GROUP V.—MEDIUM-CROWNED HYBRIDS

This large group of cup daffodils is a most interesting one and corresponds practically to the second division of Baker's monograph "the medio-coronati." In this we consider seven hybrid groups which are distinguished by the proportionate length of the trumpet which is now shortened to a cup. All are hybrids between the larger-crowned, or trumpet daffodils and the smaller-crowned or saucer narcissus. The sections as here grouped are in relation to the diminishing size of the crown or cup.

A. N. incomparabilis; hybrid between yellow Ajax and *N. poeticus;* goblet-shaped crown one-third to three-quarters the length of the petals; colouring, various.

B. N. Nelsoni; Nelson's goblet-cupped, or "shortened bi-colour"; garden hybrids between bicolor Ajax and *N. poeticus.* White petals; goblet-shaped crown more than one-half the length of the petals.

C. N. Leedsii; Leeds' silver-winged star daffodils; hybrids of white Ajax and *N. poeticus.* In reality,

white and sulphur cupped forms of Barrii and incomparabilis.

D. N. montanus; the drooping silver-starred narcissus; natural hybrid possibly of *N. moschatus* and *N. poeticus.* Flower drooping; star-like perianth, pure white; cup white.

E. N. Maclaei; a natural hybrid probably between bicolor Ajax and *N. Tazetta,* aptly described as "drooping baby bicolor." Petals milk white, with bright golden-yellow crown two-thirds as long as the petals.

F. N. Barrii; garden hybrids of various forms; hybrids of *N. poeticus* and an Ajax variety, while a cross of *N. poeticus* and *N. incomparabilis* will yield flowers of both Barrii and Burbidgei forms. Flowers usually smaller than those of *N. incomparabilis* borne nearly erect; cup always yellow and usually orange-reddish rimmed, wide-mouthed and one-fourth to one-third the length of the star-like yellow, or pale yellow petals.

G. N. Bernardi; natural hybrid between *N. abscissus* (a yellow Ajax variety) and *N. poeticus;* very variable; flowers with spreading white petals, twice as long as the yellow cup.

GROUP VI.—THE POET'S NARCISSUS

Late and comparatively late-flowered varieties in which the varieties of the white-petalled and fragrant poet's narcissus, or hybrids which are marked by their shallow, saucer-like crowns, are included.

*. *N. poeticus* with its varieties. Distinguished by pure white petals surrounding a small, round, flattened,

saucer-like crown, not more than one-half the length of the petal and edged with carmine.

B. *N. biflorus;* hybrid of *N. Tazetta* and *N. poeticus.* Flowers like *N. poeticus* in form and colour, but without the red brim to the cup and borne in clusters of two or three. This is Parkinson's "primrose peerless" daffodil.

C. *N. Burbidgei;* "dolly cup" narcissus; garden hybrid of *N. incomparabilis* and *N. poeticus,* closely resembling poeticus. Flowers borne singly; cup about one-fourth the length of the petals, and a trifle longer and not quite so flat as in *N. poeticus;* petals white, sulphur or yellow. Flowers earlier than poeticus.

D. *N. Englehearti;* Engleheart's flat-crowned poet's narcissus; hybrids of *N. poeticus* and *N. incomparabilis,* many of which have been separated from the Burbidgei section and may be aptly described as Burbidgei forms with fluted, or ruffled flat cups.

GROUP VII.—THE JONQUILS AND CAMPERNELLES

Rush-leaved, yellow, cluster-flowered and deliciously scented, small-growing species and varieties which show a great range of variation in themselves, and about which there is considerable confusion, one authority (English) holding that the true Campernelle variety has a flaring cup, and another (Dutch), equally competent, asserting the Campernelle has a spreading cup. It is in this manner

stocks are mixed and nomenclature becomes confused.

A. N. Jonquilla; true sweet-scented jonquil; petals three to four times as long as the saucer-shaped shallow crown; though usually regarded as a species, has sometimes been supposed to be a hybrid between *N. Tazetta* and *N. gracilis;* very variable.

B. N. odorus; Campernelle or giant jonquil; considered to be a hybrid between yellow Ajax and *N. Jonquilla;* larger than the preceding, wider petals and more upright cup, more widely flared.

C. N. gracilis; later flowering than the jonquil, opening yellow and fading with age. Petals spreading and imbricated. One to three flowered.

D. N. juncifolius; "baby jonquil"; the very smallest species, generally bearing three bright yellow flowers, petals well imbricated, about twice as long as the cup which is often widely expanded; very variable; petals about one-third of an inch long.

GROUP VIII.—THE TENDER, CLUSTER-FLOWERED NARCISSUS

Including all the cluster-flowered, flat-leaved species which are not reliably hardy in the North, but which may be grown outdoors in the South and are excellent for forcing.

A. N. Tazetta; remarkably variable; usually four to eight flowers; perianth segments white or yellow, well imbricated and spreading horizontally; crown cup-

shaped, relatively small and generally yellow but white in some forms; popularly known as the polyanthus narcissus.

B. & C., N. orientalis: N. intermedius. These form a sub-section and which might be called "intermediate, cluster-flowered" narcissus. They are all natural hybrids and so closely resemble the true Tazettas that it is very difficult to separate them. More hardy, and the leaves of the *N. intermedius* group are more rush-like than those of the true Tazettas. *N. orientalis* is supposed to be a hybrid between *N. Tazetta* and *N. incomparabilis.* Flat leaves.

GROUP IX.—HARDY CLUSTER-FLOWERED NARCISSUS

This group is likely to grow into considerable importance through the acquisition of the new hybrids between *N. poeticus* and *N. Tazetta.*

A. N. poetaz; cluster-flowered hybrids of *N. poeticus* and *N. Tazetta,* having individual flower characters very closely resembling the former one in colour and size. A most remarkable recent acquisition in the family.

B. N. tridymus; the long-crowned, cluster-flowered daffodils; hybrids between Ajax and *N. Tazetta;* individual flowers resemble a small form of Nelsoni. They differ from all other cluster-flowered narcissus in the comparatively long crown.

GROUP X.—DOUBLE-FLOWERING NARCISSUS AND DAFFODILS

Double forms of species or varieties from any of the foregoing groups.

GROUP XI.—AUTUMN-FLOWERING NARCISSUS

A few curious species of little garden value.

[NOTE—A botanical key to the species and sections of the genus Narcissus will be found in the Appendix, page 220.]

THE NAMED VARIETIES

In the following pages will be found descriptions of practically all the purchasable varieties of narcissus and daffodil, notes upon their importance as garden plants and approximate prices at this writing (1907). Many of the very newest seedlings are not yet on the market and so are ignored, although some of them will no doubt supersede varieties now grown.

The catalogues of growers in Europe and

THE POET'S NARCISSUS IN LANDSCAPE EFFECT

In conjunction with scenery, especially where water is used, the white poet's narcissus will give most happy results. It prefers a heavy soil

POET'S NARCISSUS NATURALISED IN A LAWN

Grass that need not be mown before June can be planted with daffodils. Use the poet's narcissus on heavy ground and near the water, and the trumpet daffodil varieties in higher and drier situations

America have been thoroughly searched and the synonomy noted. For instance: "Abscissus" and "Muticus" represent the same variety; "Emperor" and "Lorifolius Emperor" are the same; "Golden Spur" and "Spurius Golden Spur" are the same; "Grandis" and "Grandee" are the same. These different names for one variety are very bothersome to the beginner, as I know by experience.

If the name of a variety be known, but not its class, reference must be had to the index, where it will be found in alphabetical order.

EXPLANATION OF SIGNS.

In the discriptions of narcissus and daffodils which follow various signs will be noted following the name of the variety, the meanings, of which are here explained:

The letters: A, B, C, D, E, and F, indicate the degree of earliness or lateness in flowering in the open under ordinary weather conditions, the wintry weather not unduly extended into spring to retard the earlies, nor the summer suddenly bursting forth and hastening the flowering of the late varieties. During normal seasons the difference in time of flowering between the A's and B's and C's, etc., should be from a week to ten days. We can not give the exact time that flowers are due for all latitudes and altitudes so have followed dates noted in the author's grounds near New York City. Allow six days later for every hundred

miles north and six days earlier for every hundred miles south, on sea level.

The varieties may be expected to flower near New York City as follows:

Those marked A during the first and second weeks of April.

Those marked B during the second and third weeks of April.

Those marked C during the third and fourth weeks of April.

Those marked D during the fourth week of April and first week of May.

Those marked E during the first and second weeks of May.

Those marked F during the second and third weeks of May.

The season may be considerably extended by planting in special situations and by other cultural conditions (see pages 41 and 42) so that daffodils outdoors may in fact be had for over three months.

* Vigorous-growing, free-blooming; well suited for naturalising.

† Especially adapted for naturalising in partial shade or on slopes facing the north.

¶ For planting in gardens, herbaceous borders, etc.,

§ For growing in pots, etc., for winter flowers.

In regard to awards made to varieties, R. H. S. stands for Royal Horticultural Society, and R. B. S. for Royal Botanic Society, both of London, England.

CHAPTER X

The Large Trumpet Daffodils

All varieties, regardless of size, belong to this group, if they have a tubular corona expanding trumpet-like at the mouth where it must be as broad as it is long; the trumpet not be less than three-quarters the length of the petals. This "large trumpet," or daffodil, section is again sub-divided into three colour groups, viz: the "Ajax self," or all yellow; the "Ajax bicolor," or white winged yellow trumpets; and the "Ajax albino" or all-white varieties,

ALL YELLOW TRUMPETS

This group of more than 100 different named varieties has been developed from the wild *N. Pseudo-Narcissus.* The all-yellow trumpet varieties have greater adaptability to varying methods of cultivation in most climates and soils than any other members of the family, are excellent for naturalising and for winter forcing.

Abscissus. *Syn: muticus.* (D. 12 in. † $2.50 hu.) A native of the French Pyrenees. Belongs to the broad-leaved lorifolius section and is one of the latest blooming of all trumpet daffodils. It is somewhat variable in size and form, though well-rogued cultivated strains usually produce large flowers with a much elongated trumpet of bright yellow and a sulphur-yellow perianth of twisted petals. It is a free pollen bearer and a parent of some of the best bi-colours. Well suited for naturalising. When mingled with the red-mouthed poeticus types, flowering at the same time, they cross freely and produce many interesting hybrids, and, according to Mr. Max Leichtlin, "if we are to have scarlet daffodils this would be the beginning."

Achilles. (B. 15 in. * $2.50 hu.) A native of Guernsey, very early and free flowering. A handsome flower with rich yellow trumpet and a sulphury-yellow perianth.

Admiral Makaroff. (C. 20 in. § ¶ $5 ea.) A new seedling, a fine large flower of the Emperor type: soft yellow trumpet, broad, smooth and straight with a wide-fluted mouth, perianth light yellow.

Admiral Togo. (C. 20 in. § ¶ $2 ea.) A handsome seedling of strong growth and free-blooming qualities. A bold flower with widely expanded golden trumpet and broad canary-yellow perianth: desirable for pot culture and borders.

Alida. (D. ¶ 50c ea.) A new seedling of strong growth, blooming very late. It produces a very large, finely-shaped flower with a long bright yellow trumpet and a soft canary-yellow perianth.

Alvarez. (D. 6 in. $3 doz.) A new seedling, the miniature of Emperor. A sturdy plant of dwarf growth producing dainty, rich yellow flowers of much substance.

Ard Righ. *Syns: Irish King and Yellow King.* (A 15 in. † $1 doz.) An extra early flowering variety, a favourite for forcing and for naturalising. Freshly

manured soils rich in vegetable humus it resents, thriving best in a well-drained, coarse loam. Under congenial conditions, it produces splendid large flowers with deep yellow perianths and large, rich yellow trumpets. It is one of the earliest of all large trumpets to bloom. Annual lifting is advisable as it becomes dormant early, and new root action soon begins—replanting should therefore be done not later than September.

BIG BEN. (B. 21 in. § ¶ $2.50 ea.) One of the newer varieties ranking among the giant trumpets. The flowers measure about five inches across. Perianth sulphur yellow, trumpet yellow. A flower of good form and substance; a strong grower, free seeder, and very valuable for hybridising. Awarded certificate of merit by the Royal Botanic Society.

CAMBRICUS. (B. † $1.50 doz.) A Welsh Lent lily; an early flowering beautiful variety; a favourite for naturalising in turf; perianth sulphur, trumpet yellow

CAPTAIN NELSON. (B. 13 in. § ¶ $2.50 doz.) A large distinct and handsome early flower of soft, clear yellow; long incurving perianth petals; trumpet of gigantic size, long and spreading. A fine sort for pot and garden culture: Awarded first-class certificate by the Royal Horticultural Society.

CERVANTES. (A. 15 in. § $1.50 doz.) A remarkably early flowering form of Princeps which it resembles in form. It is fully as large in size though of rather a different colour being a uniform pale primrose in tone. It can be flowered by Christmas if desired, and is valuable as an early market flower.

C. H. CURTIS, (C. 18 in. § ¶ $1.50 ea.) A magnificent new variety similar to Monarch but much better; a very large flower of model form with a bold expanded trumpet of golden yellow and a broad smooth perianth of deep primrose.

CLEOPATRA. (D. § ¶ $25 ea.) Another new variety

resembling Monarch. It is one of the largest and most perfectly formed of all the giant yellow trumpets. The trumpet is long, bold and of deep yellow: the perianth rich yellow, its petals broad and gathered at the base. Like all the largest flowering sorts it is late in blooming. Especially good for pots and borders. Awarded the certificate of merit from Birmingham and also from the Royal Horticultural Society of England.

CORONATUS. (B. 19 in. † $5 doz.) An early flowering variety with a broadly expanded trumpet of rich yellow and a spreading light yellow perianth of wide petals. It thrives best in partially shaded situations. First-class certificate, R. H. S.

COUNTESS OF ANNESLEY. (A. 15 in. † § ¶ $1.50 doz.) A vigorous, extra early flowering Irish daffodil with a distinctive large bold flower, trumpet of a rich golden yellow well expanded, serrated and flanged: perianth sulphur, yellow, imbricated and hooded. Good for pot and border culture and useful for naturalising, thriving best in partial shade.

COUNTESS OF DESMOND. (B. 13 in. † $1.25 doz.) A desirable early free-flowering dwarf variety, producing a bold flower with a pale yellow trumpet, well flanged at the brim, and a perianth of soft primrose. Quite a gem when naturalised in the grass.

CROM-A-BOO. *Syn: Crown Frilled.* (A. 15 in. † 50c. ea.) An extra early flowering daffodil, found wild in Ireland. The trumpet is frilled or gathered the whole length. Colour, a self yellow. It thrives best when naturalised in partial shade.

DANIEL DEWAR. (B. * $1.50 doz.) A very early flowering daffodil, varying in colour from orange-yellow to cream white, this variation being often shown in one flower. It is a free seeder and splendid for naturalising in grass.

DEFIANCE. (A. 21 in. $3 ea.) A new daffodil with light

yellow petals, and a beautifully twisted, large trumpet, golden yellow—well flanged at the brim.

EARLY BIRD. *Syn: North Star.* (A. § ¶ $2 doz.) Perhaps the earliest yellow daffodil in cultivation. It is admirably adapted for forcing, and if potted in September may be had in flower at Christmas. Out of doors it blooms two to three weeks earlier than any other sort. The flower is of medium size and resembles the Tenby in outline. The colour is full yellow, the perianth perhaps slightly lighter in shade.

ELIZA TURCK. (C. 11 in. ¶ § * $1.50 doz.) A good-growing, free-flowering dwarf variety, well suited for the front of borders and edgings, for rock gardens and naturalising, as well as for pot culture. The flowers, of refined form, are of soft, uniform yellow.

EMPEROR. *Syn: Lorifolius Emperor.* (C. 21 in. § ¶ * 60c. doz.) A universally admired variety. It is one of the best and largest of the all-yellow daffodils, deservedly popular for pot culture, forcing, naturalising and for use in borders. The flowers, borne on long stems, are of immense size, firm in substance and of well-balanced form. The broad trumpet is rich golden yellow, and the petals—broad and rounded—are but slightly lighter in tone. It is a strong, healthy grower and a free bloomer, doing its best in a strong, rich, well-drained loam.

EXCELSIOR. *Syn: Spurius Excelsior.* (B. 18 in. § ¶ * $1 doz.) A new extra large, early flowering, variety, similar to Golden Spur, but richer in colour, being a deep self-yellow throughout; splendid for pot culture and for forcing, and is thought to be the forcing narcissus of the future.

FRED MOORE. (C. 14 in. § ¶ $2 ea.) A new seedling; a handsome flower of much substance, with an immense deep golden trumpet, well expanded at the mouth. The broad petals are well formed and of light yellow. A grand variety for pot culture and for borders. Award of Merit, R. H. S.

GEORGE PHILIP HAYDEN. (C. 18 in. $125. ea.) A new variety, having a very large, extra good flower of splendid texture and refined form. Trumpet, canary yellow, with large open mouth, fluted and flanged; perianth light yellow, the petals being broad and rounded. A strong grower, with wide foliage; flowers in mid-season.

GLORY OF LEIDEN. (D. 14 in. § ¶ $2.50 doz.) Dubbed and truly "The King of Daffodils." It is a giant seedling resembling, but superior to, Emperor, one of its parents. A strong grower, with massive flowers of great substance, boldly tilting upwards on strong stems, challenging admiration and comparison with more modest semi-pendent flowering varieties. Glory of Leiden, big and beautiful, seems conscious of its superiority in size, strength and durability. It comes unscathed through vicissitudes of unseasonable weather that dim the beauty of many more delicate sorts. It can always be depended upon as a "show flower," and to be the surprise and envy of daffodil-loving visitors. The enormous trumpet is rich yellow, the petals broad and rounded, of lighter shade with deeper yellow pencilings. For pot culture, flower beds and borders it is most effective. First-class certificate, R. H. S.

GOLDEN BELL. (A. 14 in. § ¶ * $1 ea.) An extra-early and remarkably free-flowering daffodil, with broad, light yellow twisted petals and a large and prominent trumpet, with an open frilled mouth. It is a tall grower, and most adaptable for pot culture, borders and naturalising. First-class certificate, R. H. S.

GOLDEN EAGLE. (B. § $1.50 doz.) A vigorous, early flowering, self-coloured variety of rich yellow. A splendid forcer and valuable for market.

GOLDEN PLOVER. *Syn: Golden Princeps.* (B. 14 in. § ¶ * 75c. doz.) An early flowering Irish daffodil having a rich yellow trumpet and perianth. It is of the same habit and nearly as early as Ard Righ, with a strong, vigorous constitution. Easily forced for cut flowers, and as it seeds

freely is a desirable variety for gardens and naturalising.

GOLDEN PRINCE. (B. 16 in. $4 doz.) An early flowering daffodil of a uniform golden yellow. The trumpet is lobed and serrated at the brim. Foliage broad and leek like.

GOLDEN SPUR. *Syn: Spurius Golden Spur.* (A. 18 in. * § ¶ 50c doz.) A native of the Netherlands. An extra early free-flowering variety that is a great favourite with the writer, who if he could have but one daffodil would choose this. It is not the biggest, nor yet the most beautiful, but when you plant a dozen bulbs of it you are pretty sure to get eighteen to twenty-four flowers all large, perfect and as richly coloured as the most fastidious grower could desire. Golden Spur has a vigorous constitution, is easily forced in flats, flowers beautifully in pots, and is perfectly at home in the garden border; and when naturalised, seeds freely and increases correspondingly. The flowers of large size have a spreading megaphone-like trumpet with gracefully rolled brim, perianth large and open. The colour, a self-yellow, is almost as deep as that of maximus.

HAMLET. (C. 18 in. § ¶ $1.50 ea.) A handsome new variety after the style of Emperor, with a bold, well-formed yellow trumpet, and a large broad, flat, light yellow perianth.

HENRY IRVING. *Syn: Spurius Hy. Irving.* (A. 18 in. § ¶ * 50c doz.) A native of the Netherlands and a fine type of spurius major, with handsome flowers of great substance. Trumpet, rich golden yellow, wide and recurved at the mouth. Perianth, broad, spreading and of clear yellow. Excellent for forcing, pot culture, growing in borders and naturalising in grass. It thrives best in sandy, gritty loam, and like all of the "spurius" class, can be injured by kindness; that is, given a soil too freshly manured.

HER MAJESTY. (B. 15 in. $1.50 doz.) An early flowering light, self yellow, expanding trumpet, beautifully serrated at the brim.

Hon. Mrs. Jocelyn. (D. 19 in. § ¶ $1 ea.) A new and but is a free producer of large flowers elegantly formed, and of a uniform rich golden yellow; perianth, large and winged, the petals being longer than the straight crown or trumpet, which is elegantly serrated at the brim. Well suited for both pot and border cultivation.

Isolde. (D. 20 in. § ¶ $50 ea.) A new daffodil having a handsome large flower with a bold campanulate light yellow perianth, which sometimes measures five inches across; trumpet long and of soft yellow. This is a good late flowering variety for both pot and border culture.

Ivanhoe. (C. 10 in. § ¶ $1.50 ea.) A new variety of rich uniform lemon yellow. It is similar to John Nelson, but of better quality.

John Bright. (A. § $2 doz.) Of Dutch origin, belonging to the spurius family. It is of dwarf spreading rich yellow colour. The petals incurve towards the trumpet, of distinct clear yellow. Excellent for pot culture and forcing.

John Nelson. (C. 10 in. § ¶ *$5 doz.) A very distinct late flowering dwarf variety, of an almost uniform rich yellow color. The petals incurve towards the trumpet, forming a large rounded flower, which droops and nods almost to the surface like Mrs. J. B. M. Camm, Colleen Bawn, and others of its class. For pot and border cultivation and for naturalising it is especially adapted.

King Alfred. (B. 24 in. § ¶ $15 ea.) A new daffodil, perhaps the most beautiful of all yellow trumpets; free and early flowering. The flowers are not only of immense size but are of noble form and great substance. The trumpet is extra large and elegantly frilled at the mouth. The colour is a deep rich maximus yellow. The plant, which has bluish green foliage, is strong, vigorous and healthy, and grows two feet high. It is a superb variety for exhibition, pot and border culture. First-class certifi-

cate, R. H. S.; Award of Merit, R. B. S., and Premier Prize Midland Daffodil Society.

KING HUMBERT. *Syn: King Umberto.* (B. † $2.50 hu.) A wild, early flowering Italian daffodil of robust growth. Desirable for naturalising in shaded places, and also amenable to forcing. Trumpet yellow, perianth, paler in colour with darker yellow stripes through the centre of each petal.

LADY HELEN VINCENT. (C. 13 in. § ¶ $6 ea.) A comparatively new, large trumpet variety, with flowers of refined form and good substance; blossoming in mid-season. Colour, a uniform, soft and clear yellow; excellent for pot and border cultivation. Award of Merit, R. H. S.

LADY WILLES. (C. 14 in. § ¶ * $3 doz.) A handsome, strong-growing, free-blooming daffodil, with bold yellow trumpet, having a deeply flanged open mouth. Perianth light yellow. Adaptable for both pot and garden culture.

LORNA DOONE. (B. 15 in. $4 ea.) A distinct new variety of richest canary yellow. Trumpet long, tube-like and beautifully fluted. Erect habit. Foliage broad, resembling that of Emperor.

LORD ROBERTS. (C. 23 in. § ¶ $20 ea.) A new giant-flowering variety, and one of the grandest of all yellow trumpet daffodils. Broad and massive petals and a noble trumpet, all of a rich uniform golden yellow. A strong, tall grower and blooms freely in mid-season. Awarded first-class certificate, R. H. S., Midland Daffodil Society, and Cornwall Daffodil Society, etc.

LORIFOLIUS. A section with broad, flat, massive foliage best represented in the varieties Abscissus (Muticus), Emperor, P. R. Barr, Rugilobus, etc.

MAJOR. (C. § ¶ * 50c. doz.) The true Trumpet Major has a handsome large flower of rich golden yellow, nearly as deep as Maximus. It is a mid-season variety, effective for pot culture; also for borders and naturalising where conditions suit it, otherwise a shy bloomer. Tens of thousands, perhaps millions of bulbs, are annually sold under

the name of "Trumpet Major," most of them for forcing. To the best knowledge of the writer the majority of these are the following:

MAJOR SPURIUS. (A. § † $2.50 hu.), also known as Early Flowering Major, Early Trumpet Major, and Spurius Major, is in reality a type of Single Van Sion. A splendid winter forcer, and valuable for cut flowers. Similar in form to the true Trumpet Major, but somewhat smaller and lighter in colour. Spurius Major is two to three weeks—some claim four weeks—earlier.

MAXIMUS, or Trumpet Maximus (B. 18 in. § ¶ * 75c. doz.) is the recognised peer in colouring among yellow daffodils, being intense golden-orange throughout. The reputation of any daffodil approaching "maximus colour" is established. Unfortunately, perfection in everything is never centred in any one individual, animal or plant, and N. Maximus is no exception. While the flower is of grand size, form and colour, with an immense, beautifully formed, well-opened recurve-brimmed trumpet and large, gracefully twisted petals, it has one fault—shy blooming, or not blooming at all, excepting under congenial conditions. Those who supply these conditions will glory in the result. The bulbs of N. Maximus require to be planted not less than five inches deep in well-drained (and if possible, trenched) strong rich loam, with some very old rotted manure below—not in contact with—the bulbs. The prong-like roots start early in the fall down deep in the soil. If the bulbs can be planted in August—and the roots find their desired food—magnificent flowers may be expected, on stems two to three feet high.

MAXIMUS SUPERBUS LONGIVIRENS. *Syn: Maximus of the Pyrenees.* (B. 18 in. § ¶ * $2 doz.) The characteristics of this variety so closely resemble those of the variety just described that the writer has been unable to appreciate any distinguishing differences in comparative tests covering several years. It may be that under other conditions of

soil or climate, Maximus-longivirens might prove the cataloguers' claims of superiority, viz.: "Earlier in flowering, a freer bloomer and of richer orange-yellow colouring." The added name "longivirens" (meaning long-lived foliage) applies, as far as my experience goes, to both varieties, the leaves remaining green a month longer than the foliage of other varieties.

MIKADO. (C. 15 in. § ¶ $3 ea.) A handsome, large flowering new seedling of the Maximus style. Colour, golden-yellow. Trumpet, very large, open-mouthed and deeply flanged at the brim. Petals, gracefully twisted. A mid-season free-flowering variety.

MINOR. *Syn: Trumpet Minor, Nanus minor, Dutch minor,* etc. (A. 7 in. † $2.50 hu.) This is the single form of the double-flowering Rip Van Winkle. Minor is a very dwarf, very early and very small flowering type, a perfect "baby daffodil," valuable for edgings, rock work and for naturalising. It increases rapidly, thriving best in shaded locations. The trumpet, expanded and distinctly lobed, as well as the gracefully twisted petals are of rich yellow.

MINIMUS. *Syn: Nanus minimus.* (A. 3 in. † 75c. doz.) This pigmy, the smallest and most dwarfed trumpet daffodil known, grows only three inches high, producing dainty, perfectly formed flowers, not exceeding one inch from tip to tip of perianth. The colour of both trumpet and perianth is rich yellow. This quaint lilliputian is a gem for edgings, rock work and naturalising, and if grown in a pot, gives a most charming effect. It thrives in peaty soil or sandy, gritty loam.

M. J. BERKELEY. (B. 17 in. § ¶ * $1 doz.) A magnificent large and early flowering variety, rich yellow colour, the flower resembling that of Maximus but slightly lighter in tone. The trumpet is large, well expanded and reflexed at the brim; the petals are better formed than those of Maximus. Popular for pot and border cultivation and naturalising.

MONARCH. *Syn: Golden Giant.* (C. 20 in. § ¶ $5 ea.) A noble flower, large, of model form, good substance, one of the best of the yellow trumpets. Large trumpet and perianth, both of full rich yellow; a strong, sturdy grower, flowering in mid-season. Superb for pot and border culture.

MORNING STAR. (B. $1.50 doz.) An early flowering dwarf variety, with a deep yellow trumpet and a pale yellow perianth.

MRS. H. J. ELWES. (B. 17 in. $2 doz.) Very early flowering variety with large trumpet. Entire flower soft, clear yellow.

NANUS. *Syn: Nanus Major*: *Lobularis Neerlandicus.* (A. 6 in. † $1.50 doz.) Closely similar to Dutch minor, with possibly a trifle larger flower. A very dwarf, extra early flowering variety, blooming with chinodoxas, scillas and crocus, and is a pretty companion for such early flowering bulbs. Yellow trumpet and lighter yellow perianth. In Ireland it is popularly called the Earth Star, "its flowers bespangle the earth like golden stars." It grows about six inches high, thriving best in partial shade, and is a gem for naturalising and edgings.

OBVALLARIS. (A. 12 in. † ¶ § 50c. doz.) The old "Tenby" daffodil, long popular for its many good qualities. A distinct extra early variety of stiff upright habit. Flowers full rich yellow, the trumpet short but well expanded, petals broad and well rounded. It forces well, is excellent in pots and thrives when naturalised in shaded positions.

OBVALLARIS PALLIDUS. *Syn: Buttercup.* (A. 12 in. § † $1 doz.) The pale primrose-coloured form of the Tenby daffodil. Extra early, a beauty in pots, and superb for naturalising in grass.

OONAH. (B. § † $2 doz.) A very early flowering bright canary-yellow self; a new seedling with flowers of lasting quality. A free seeder.

OPHELIA. ($1.50 ea.) Seedling from Emperor. Flowers neatly hooded and of refined form. Colour, rich canary yellow.

OPHIR. ($3 doz.) A long barrel-shaped trumpet of rich golden yellow. A good market variety. Dwarf.

OTHELLO. (E. 10 in. § ¶ * $1.50 ea.) A new seedling with a broad campanulate, primrose-yellow perianth and a rich yellow trumpet. A flower of good substance. A dwarf, sturdy grower. Very late.

PHIL MAY. (C. § ¶ $4 ea.) A new variety with large bold straight yellow trumpet and paler yellow perianth. A strong, sturdy grower for pots and borders, flowering in mid-season.

P. R. BARR. (D. 16 in. § ¶ * 50c doz.) A splendid late-flowering Emperor-like variety of sturdy growth and free-flowering qualities. The flowers are of good form and very large. Trumpet, rich yellow; perianth, primrose yellow. A valuable variety for anything and recommended for flower beds, borders and for naturalising in grass.

PRINCE GEORGE. (C. 16 in., $2.50 ea.) A very well-formed flower, with a long, soft, yellow trumpet and a primrose-yellow perianth. Sturdy grower.

QUEEN OF HOLLAND. ($1 ea.) Very large. Both trumpet and perianth sulphur yellow.

RANGER JOHNSON. (D. 15 in. § ¶ $5 ea.) A new late-flowering variety. Flower is large, of refined form and good substance. Colour a uniform soft yellow. Trumpet large and elegantly flanged at the brim.

RAY SMITH. (16 in. § ¶ 50c ea.) A graceful flower of uniform rich yellow colour, the flower large, of good substance. The petals gracefully twisted and tapering. A free bloomer and a strong grower, with broad deep glaucous blue foliage.

REGINA MARGUERITA. (B. 75c doz.) Very early flowering, with a deep yellow trumpet and lighter perianth with golden stripes in the petals.

Rev. D. R. Williamson. (§ ¶ $2.50 ea.) A new seedling with a long, handsome rich yellow trumpet and lighter yellow petals. A bold, handsome flower.

Rugilobus. *Syns: Rugilobus lorifolius. Pseudo-rugilobus.* (B. 15 in. ¶ * 50c doz.) A most useful low-priced daffodil, not unlike a small Emperor, but earlier. A standard variety for cutting, the flowers being of good substance and travel well. Trumpet rich yellow, furrowed or fluted, perianth sulphur yellow.

Sabrina. (§ ¶ $50.00 ea.) A handsome new variety with a bold stiff pale yellow trumpet well flanged at the mouth; perianth cream colored.

Santa Maria. (A. 14 in. $1.50 doz.) Very early flowering, remarkably distinct and graceful. Perianth charmingly twisted, and of great substance. Colouring very deep orange yellow.

Shakespeare. (C. § ¶ 75c ea.) Bold and erect with an immense deep golden yellow trumpet, the longest of any daffodil. Petals, sulphur yellow, large and broad.

Shirley Hibberd. (¶ 50c doz.) Distinct free flowering with a much expanded deep yellow trumpet and perianth of light yellow. Remains in bloom for seven to eight weeks.

Spread Eagle. (E. ¶ $1.50 doz.) A magnificent new variety, very late, with large deep rich yellow flowers. The petals are gracefully twisted: a flower of much substance, therefore well suited for cutting. Strong, vigorous grower with dark green foliage.

Sprightly. (B. § ¶ * $3.50 doz.) Strong free grower with brilliant golden-yellow flowers of medium size. Trumpet open at the mouth, and prettily frilled. Foliage deep blue-green.

Spurius. *Syns: Single Van Sion of the Dutch: telamonius* of English Gardens. (A. § ¶ † 35c doz.) Very early free flowering. Good sized flowers of soft yellow; trumpet well expanded; perianth hooded. Very useful for forcing,

TRUMPET DAFFODILS NATURALISED

On partially shaded, hilly slopes, the trumpet daffodils will "naturalise" best, increasing freely. Plant the white trumpet on the drier, high ground; the bicolours and the all-yellows on the lower places

ALL-YELLOW TRUMPET DAFFODIL

Glory of Leiden, one of the handsomest of the large trumpet section; all yellow, trumpet rich yellow, perianth pale yellow, sometimes with deeper yellow markings

garden culture, and naturalising. Popular on account of its satisfactory qualities and low price. There are several forms of spurius resulting, no doubt, from differing environments and selection. Spurius major and spurius major Blondin, spurius excelsior, spurius Golden Spur, and spurius Henry Irving are improvements. All narcissus of spurius blood are impatient of too rich or freshly manured soil, and can be killed by kindness. They thrive best in gritty loam or turf and in partial shade.

THOMAS MOORE. (B. 75c doz.) A deep yellow trumpet with clear yellow perianth: said to be similar and better than Trumpet Major.

TOTTENHAM YELLOW. (B. § ¶ 75c doz.) The outline of the flower resembles that of a small Maximus; trumpet deep yellow, perianth of lighter tone the petals being gracefully twisted, very early and fine for pot culture.

TUSCAN BONNET. (75c doz.) A pale straw-coloured form of Princeps, distinct and beautiful flower of bold outline.

VAN WAVEREN'S GIANT. (C. § ¶ $25. ea.) A magnificent new variety—probably the largest trumpet daffodil yet introduced, bright yellow trumpet with a very large open mouth flanged at the brim: perianth light yellow and of rather campanulate form, flower of great substance, very tall grower; late.

WILLIE BARR. (15 in. § ¶ * $3 doz.) A strong growing daffodil producing perfectly shaped flowers of much substance: an elegantly brimmed trumpet of deep yellow and a campanulate perianth of soft and clear yellow.

ALL WHITE TRUMPETS

Descended from the very rare wild white forms of Pseudo-Narcissus, particularly the Pyrenean types moschatus and pallidus-

præcox. As a class they are more delicate in constitution than their self-yellow and bi-colour brethren, requiring conditions akin to those in which their mountain-loving ancestors thrive; viz: partial shade, in well underdrained soil of gritty loam and decayed leaf mould. There are now fully 50 named varieties, varying in colour from all pure white to palest sulphur.

ALBICANS. *Syns: Silver Trumpet, Sulphur Trumpet, Dutch Moschatus.* (B. 14 in. § ¶ * 75c doz.) This is a large form of the native Spanish moschatus and is sometimes known as the Large White Spanish daffodil. A strong grower. Early and free bloomer, bearing large handsome musk-scented flowers with white perianth and a long trumpet prettily recurved at the brim. It opens straw colour but soon changes to white.

ALICE KNIGHTS. (A. 12 in. § ¶ $8 ea.) A new variety and the earliest of all white trumpets. Good substance, lasting well whether cut or on the plant. Perianth white, trumpet cream white of elegant form with an open mouth prettily filled. Good constitution and a free bloomer. Award of Merit, R. H. S.

APRICOT. (C. 16 in. § ¶ 75c ea.) A new and remarkably beautiful variety with a colouring heretofore unknown among narcissus, the long straight trumpet being of a rosy apricot hue, though opening creamy buff in strong contrast to the pure white perianth. The flower is of good size and form. Delightfully fragrant. Plant healthy, vigorous. Several certificates and awards of merit are to its credit.

ATALANTA. ($100 ea.) A new seedling with broad snow white perianth petals and a long, pure white bell-shaped trumpet.

AVALANCHE. ($150. ea.) A very elegant new seedling with broad petals of pure white, curving towards the trumpet which is long and straight and also of pure white.

CECILIA DE GRAAFF. (D. 20 in. $1 ea.) A new seedling of interesting form. The medium-sized flower has an elegantly spreading channelled trumpet recurved at the brim. Colour, creamy-white; the perianth is also creamy-white with a yellowish line running through each petal.

CERNUUS. (A. † ¶ $1 doz.) The Silvery Swan's Neck daffodil, so called from the graceful poise of the pendent flower. Very distinct. Early flowering. Perianth silvery white, trumpet cream white passing to white. The petals and trumpet are of the same length. Best when grown in shade.

CERNUUS PULCHER. (B. 16 in. § ¶ $2.50 doz.) The large Silver White Swan's Neck daffodil. A somewhat larger form of the preceding and a little later in flowering, but classed among the earlies. The gracefully drooping flower composed of broad and spreading petals of pure white and a long, expanding trumpet opening primrose but changing to silvery white. A strong grower.

COLLEEN BAWN. (A. 15 in. § ¶ † $4 doz.) A gem among white daffodils, silvery-white drooping, nodding flowers. Gracefully twisted petals. Best when grown in shade and grass.

CORA PLEMP. ($1.25 ea.) A new seedling with white flowers of light primrose colour, passing to white.

C. W. COWAN. (C. 16 in. § ¶ $1.50 doz.) A distinct short, thick set albino. An elegant flower with white perianth and a sulphur trumpet passing to white. A strong grower and free bloomer.

DUCHESS OF CONNAUGHT. (B. 11 in. 75c doz.) A neat

habited plant well suited for small beds, etc.—bearing dainty flowers of light primrose colour, passing to white.

DUCHESS OF NORMANDY. (B. § ¶ $3 ea.) A new early variety with a long white beautifully ribbed trumpet, mouth open and flanged. Petals of white, fairly broad, slightly shouldered, and twisting. Delicately scented.

DR. HOGG. ($3 ea.) Perianth white; trumpet sulphur passing to white. First-class certificate.

EXQUISITE. ($1 ea.) A tall-growing, early-flowering albino with sulphur white petals, and a primrose trumpet maturing white.

F. W. BURBIDGE. ($1 doz.) Strong and vigorous, with an elegantly serrated long trumpet of sulphur passing to white and a white perianth.

GRACE DARLING. (B. 20 in. § ¶ $1 ea.) A strong-growing, free-flowering new seedling of great beauty: the petals of pure white are gracefully twisting and overlap the elegant trumpet of light sulphur maturing white.

HATFIELD BEAUTY. (C. 21 in. $15 ea.) A bold and showy new variety with creamy-white perianth and a light canary trumpet well expanded and flanged at the mouth.

HENRI VILMORIN. (C. 13 in. § ¶ $125. ea.) A magnificent new white daffodil that scores high on all points. Refined texture and form, the perianth of Empress shape spreading 4½ inches across: the trumpet is long and of good substance. Award of Merit, R. H. S.

JENNY WOODHOUSE. ($3 doz.) Best described as a white obvallaris or Tenby daffodil. Trumpet beautifully imbricated and flanged. A free seeder. A small shapely daffodil for the buttonhole.

LADY AUDREY. (D. § ¶ $25 ea.) A new late-flowering variety of great beauty; perianth white, slightly campanulate and a straight, bold creamy-white trumpet widening at the mouth. Award of Merit, Birmingham.

LADY OF THE SNOWS. (D. $125 ea.) A large and beautiful new seedling with a broadly rounded white

perianth—and a well-formed, white trumpet well-frilled at the brim.

LADY GROSVENOR. (75c doz.) White perianth and sulphur white trumpet.

LADY SOMERSET. (C. 12 in. § ¶ $2 ea.) A new seedling of strong growth with long-stemmed pure white flowers. Petals long and gracefully twisting; trumpet very long.

LADY SYBIL. (A. 11 in. ¶ * $1 ea.) A new variety with flowers of medium size and of uniform pale sulphur colour. The open-mouthed short trumpet is prettily flanged.

L'INNOCENCE. (C. 20 in. $1 ea.) A magnificent daffodil with purest white perianth, and broad straight trumpet of sulphur passing to white.

LISMORE. (B. 15 in. § ¶ $3 ea.) Strong constitution. Perianth white with a faint suggestion of green. Trumpet sulphur white. First prize at Truro.

LOVELINESS. (D. 14 in. § ¶ $125 ea.) A new and highly recommended seedling, producing very large flowers. Petals broad, smooth, stiff and snowy white. Trumpet of elegant form well expanding to the mouth and also white. Award of Merit at Birmingham and also at Truro.

MADAME DE GRAAFF. (D. 16 in. § ¶ $7.50 doz.) This magnificent seedling ranks front of all white daffodils. The flowers, while unusually large for an albino, are of splendid substance and unsurpassed in grace of carriage and elegance of form. The fully expanded flower is pure white, though in opening the trumpet usually shows a tinge of sulphur. A strong grower, free bloomer, and equally well suited for pot or garden culture. First-class certificate, R. H. S.

MARCHIONESS OF LORNE. (B. 12 in. ¶ * $1 doz.) Not unlike Princess Ida, perianth sulphur white, trumpet primrose and elegantly recurved.

MATSON VINCENT. (D. 14 in. § ¶ $2.50 doz.) Strong-growing, late-flowering, with a neat, small, pure white flower, the trumpet being well expanded and lobed.

MOSCHATUS. (A. 6 in. †$4 hu.) A wild sub-species of *N. Pseudo-Narcissus* found in the Pyrenees and especially plentiful in places on the Spanish side of these mountains. It varies in size, form and colour accordingly as influenced by natural hybridisation when growing in proximity to other native types. In its purest form it is of dwarf habit with rather small flowers. The whitest of all trumpet daffodils when fully open, but of a sulphur tinge in the bud and expanding stages. It is very early in flowering and, like most wild types, quite at home when naturalised; a grassy slope facing north being especially congenial. In cultivation many selections have been made from "moschatus" which are catalogued under various names as albicans, moschatus of Haworth, etc., and it is the opinion of the writer that many if not all varieties of the so-called white trumpet daffodils owe their varying degrees of trumpet whiteness, directly or indirectly, to the predominance of moschatus blood.

MOSCHATUS OF HAWORTH. (A. 6 in. †75c doz.) A charming dwarf small-flowering variety, a selection from the preceding with charming, purest white flowers. A gem for naturalising.

MRS. J. BELL CAMM. (D. 12 in. *$2 doz.) An exceedingly handsome late variety of vigorous growth, producing large flowers that nod to the ground. Lasting well when cut. Perianth white, the trumpet sulphur white. First-class certificate, R. H. S. (*Do not confound this, as the writer did at first, with Mr. J. Bell Camm, the bi-colour.*)

MRS. BETTRIDGE. (C. 12 in. $15 ea.) Very large flower with white, prettily twisted petals and cream-coloured trumpet, well expanded, fluted, and flanged at the brim.

MRS. BURBIDGE. A vigorous grower with large flower, opening sulphur but passing to white.

MRS. GEO. H. BARR. (D. §¶$125 ea.) A very lovely new white daffodil of exquisite form: petals slightly curv-

ing towards the well-formed open-mouthed trumpet. Award of Merit, Birmingham.

MRS. THOMPSON. (B. 14 in. § ¶ * $1 doz.) A handsome extra early strong grower of good shape and substance and a free bloomer. Flowers large and pure white, the trumpet being elegantly frilled. One of the earliest of the moschatus section.

MRS. VINCENT. (D. 12 in. § ¶ $2.50 ea.) A rare beauty of perfect form and of great substance. Perianth and trumpet pure white. Good grower but late.

PALLIDUS PRAECOX. (A. 12 in. † 60c doz.) The earliest of all white trumpet daffodils and very popular. Varies slightly in form and colouring, but usually the perianth is pure white and the trumpet pale straw colour. When grown in partial shade it comes pure white. Naturalised on moist grassy slopes facing north it is perfection. Avoid manure.

PETER BARR. (C. 16 in. § † $250 ea.) All reports indicate that this is the most beautiful white trumpet daffodil yet raised. The writer has not grown it nor seen it. It is likely that in a few years the increase will be such that the price will fall within the reach of ordinary people.

The English "Gardeners' Chronicle's" description in substance is as follows: "PETER BARR is not the only white Ajax or large trumpet variety that has been raised, but it is certainly the best and *much the best*.....In colour the flower is described as white, but it must be understood that by this is not meant the pure white which is seen in *Narcissus poeticus*. No trumpet daffodil is yet so pure, but Peter Barr is the very palest sulphur-white, the perianth being a shade purer than the trumpet. It is said to have been raised from Monarch and Madame De Graaff, and will be a fitting memorial to a man whose life has been spent in developing and popularising the daffodil."

The raiser's description reads thus: "The finest white trumpet daffodil yet raised. It is of distinct and elegant form

having a beautiful pure white shouldered perianth and a large handsome trumpet almost pure white. The flower is large and bold—of beautiful symmetry and fine substance. It is a strong grower and a free bloomer with handsome deep bluish green foliage. First-class certificate, R. H. S.

PRINCESS IDA. (B. 14 in. § ¶ $2 doz.) A distinct strong-growing free-blooming early white variety with a silvery trumpet edged at the brim with yellow. A good grower and charming in pots.

ROWENA. (B. 13 in. § ¶ $3 doz.) A new robust free-blooming seedling with spreading star-like petals of snowy white and a large trumpet, silvery-white flushed peach, expanding to the brim.

SIR STAFFORD NORTHCOTE. (B. 15 in. ¶ * $1.50 doz.) A strong-growing free-blooming early variety with a silvery-white perianth and a long pale sulphur trumpet. Good for naturalising and for borders.

SNOWFLAKE. (B. 14 in. § ¶ $4 doz.) Early flowering strong-growing with distinct and handsome flowers holding their heads well up. Perianth white, trumpet soft apricot passing off white. Certificate of Merit, R. H. S.

SULPHUR KING. (C. 12 in. § ¶ $2 ea.) New seedling producing in mid-season a well-formed flower of good substance. Perianth pale sulphur, long trumpet of soft sulphur yellow.

TORTUOSUS. (A. 15 in. § ¶ † $2.50 doz.) A popular, vigorous, extra early flowering form often called "The Swan's Neck Daffodil" from the graceful pendent poise of the flowers. Selections have been catalogued under the names of Leda, Sarnian Belle, etc., but any distinctiveness claimed for these has apparently merged back to the type until their "variety names" have become merely synonyms. All, in fact, belong to the variable moschatus group. Tortuosus being distinguished by its long trumpet of pale

sulphur and gracefully twisted petals of pure white. The flowers are delightfully musk scented.

WILLIAM GOLDRING. (C. 16 in. § ¶ † $1 doz.) A drooping Swan's Neck daffodil of good constitution, with long tapering petals of pure white, gracefully curving over the primrose tinged white trumpet.

W. P. MILNER. *Syns: Minnie Warren, nanus albus.* (B. 11 in. § ¶ * $1.25 doz.) Dwarf, of good constitution, especially effective for small beds, edgings, naturalising in grass and a lovely thing to plant permanently in rock work. The dainty little flowers of cowslip fragrance are freely produced; creamy-white out of doors but pure white when grown inside. It seeds freely.

TWO-COLORED TRUMPETS—WHITE WINGED OR BI-COLOUR

Hybrids between the all-yellow and the all-white trumpet daffodils. They have "white wings," or petals, and yellow trumpets. Healthy vigorous growers, thriving in the garden border, in pots, or naturalised.

ADA BROOKE. (D. 15 in. § ¶ 50c doz.) A late free blooming variety flowering after Empress and before Grandis. Trumpet orange yellow, perianth creamy-white. A strong grower and valuable for cutting.

BICOLOR. ($1.50 doz.) The type, dwarf and late flowering. Rich yellow trumpet and broad pure white petals.

BICOLOR OF HAWORTH. (E. 13 in. † $1.50 doz.) Containing abscissus blood—and like the latter—among the latest to bloom. The flowers last into June if grown in partial shade. Trumpet rich yellow, perianth pure white. In outline the flowers resemble the elegantly formed earlier flowering Horsfieldi.

BREVIFLOS. ($2.50 hu.) Neat habit, small, early to bloom. Increases rapidly. Golden yellow trumpet and sulphury-white perianth.

CABECEIRAS. (C. 15 in. †$3 hu.) A Spanish daffodil, showy and handsome, with large rich yellow trumpet frilled at the brim, and a white perianth shading to primrose at the base.

CALPURNIA. (D. 15 in. § ¶ $25 ea.) A long straight trumpet of soft primrose yellow and bell-formed perianth of white. New.

CAMEOENS. *Syn: Lusitanica.* ($3 doz.) An early peculiarly formed and distinct bi-colour from Portugal; yellow trumpet and sulphur-white perianth.

CYGNET. (D. § ¶ $100 ea.) New, and a beauty, long bold trumpet of canary-yellow. Elegantly reflexed at the mouth. Petals white, bold, broad and gracefully twisted. Award of Merit, R. H. S. and Birmingham.

DAINTY MAID. ($1.50 ea.) A very dwarf new bi-colour of handsome form.

DEAN HERBERT. *Syn: primulinus.* (D. 18 in. $1.50 doz.) Of distinct, stiff, erect habit; vigorous grower. Trumpet large, rich yellow; perianth primrose changing to sulphur white.

DUKE OF BEDFORD. (B. 22 in. § ¶ $10 ea.) Exceptionally large flowers measuring 4½ inches from tip to tip of the pure white perianth, with a great broad trumpet of clear soft yellow measuring 2¼ inches across at the mouth: a flower of splendid proportions, form and substance. It flowers early, opening even before Horsfieldi and has a pleasing fragrance. First-class certificates, Birmingham, Manchester, Edinburgh.

EMPRESS. (C. 20 in. § ¶ * 60c doz.) This and Horsfieldi rank among the high-class bicolors, both being free, early and reliable producers of large well-formed flowers of good substance. They thrive under most conditions where any sort of daffodil can be expected to grow—in

garden borders, naturalised in grass, in pots, bowls of moss and water, or forced in flats for cut flowers in winter. These many merits in conjunction with the reasonable price of their bulbs render both sorts most popular. Empress resembles Horsfieldi closely, is a little later in blooming, perhaps, a little more stiff and robust in growth with not quite as white perianth petals—and a rich yellow trumpet.

E. T. Cook. (14 in. $30 ea.) New. Broad, bold perianth of white and a rich chrome-yellow trumpet.

Grandee. *Syns: bicolor maximus, grandis.* (E. 12 in. § ¶ * 40c. doz.) Late flowering; excellent for succession, blooming nearly two weeks after Empress and Horsfieldi. It is of rather dwarf growth, sturdy and robust, with broad foliage. The flowers are beautifully formed, massive and of splendid substance. Trumpet large, and long, of rich yellow. Perianth wide, round petalled and pure white. Planted in shade, it flowers in May. Good cut flower.

Gwendolen. ($125 ea.) A new bi-colour trumpet of large and noble form, white perianth petals and a long, straight light canary-yellow trumpet.

Horsfieldi. (B. 14 in. § ¶ * 50c. doz.) It is a pity that this grand and popular daffodil could not be popularly known as John Horsfield in veneration of the narcissus enthusiast—a modest Scotch shoemaker—who produced it. It is very early flowering, very free, splendid for forcing, and showy in beds and borders. The large flowers have a rich yellow trumpet and a broad petalled, well expanded perianth of pure white. Unfortunately, in the later years of its life it is getting weaker in constitution, and in some places is now becoming diseased.

Hulda. (C. 18 in. $25 ea.) New and remarkably handsome. Large and broad petals of pure white and measuring four inches across, large trumpet of pale yellow. A flower of great substance.

Ione. Trumpet rich yellow, well expanded and beautifully flanged. Perianth imbricated and straw-yellow.

ISOLDE. (D. 20 in. $75 ea.) A handsome, large, new variety, five inches from tip to tip of petals, the latter of cream colour. Trumpet long, and of soft canary. Award of Merit, R. B. S.

J. B. M. CAMM. *Syn: Mr. J. Bell Camm.* (C. 12 in. § ¶ $2 doz.) A distinct dwarf, but strong-growing variety, almost pure white, but classed as a bi-colour. The flowers, in symmetry of form, are perfection, and the chaste colouring, pure white perianth and creamy-yellow trumpet combine in causing this variety to be known as "The new queen of daffodils." First-class certificate, R. H. S.

JOHN DAVIDSON. (C. 12 in. § ¶ $5 doz.) Strong-growing, large-flowering; bearing a beautifully formed flower. Trumpet of clear yellow, widely opened at the mouth and prettily frilled. Perianth large and broad, creamy-white.

LENA. ($1.50 doz.) Long, yellow trumpet of the best form. Primrose perianth.

LOBULARIS. (A. 7 in. † 30c. doz.) This native of the Netherlands is also known as *Dutch nanus*. Dwarf and lovely for edgings and naturalising in grass. Trumpet, yellow; perianth, sulphur white.

MADAME PLEMP. (D. 16 in. § ¶ $2.50 doz.) A new late-flowering variety of strong growth, producing very large, bold, well-formed flowers of great substance. Trumpet of immense size and of rich golden-yellow; perianth, white, the petals being large and twisting gracefully; one of the finest of daffodils as a garden plant. Floral certificate at Daffodil Conference.

MAW'S BICOLOR. (A. † $2.50 hu.) An interesting but confused form about which much has been said which was true but proved untrue, and vice-versa. This paradoxical statement is explained when we understand that Mr. Maw's bicolor, "discovered" by him in the Pyrenees, was in reality "selected" by him. The *individuals* selected being everything claimed for them: superior in constitution, in

earliness, in substance, with large golden-yellow trumpets, fine white perianths, etc. Some of the progeny of these "individuals" proved so fine that they were re-named *nobilis,* and others fell so low in the scale of merit that they were named *variformis,* and others again could have been correctly named *vari-coloured.* The fact is that Mr. Maw's selections belong to a large variable family, indigenous in many mountainous sections of Southern Europe; those near abscissus being the most varied. The writer once planted 100 bulbs of Maw's bicolor with surprising results: flowers of all shapes and colours were produced, bi-colours, all yellows and exquisite albinos. Some surpassed the cataloguer's description, but many fell short. This type increases rapidly, and like many native sorts is especially suited for naturalising. Thrives best in gritty loam.

MICHAEL FOSTER. (C. 13 in. § ¶ $1.50 doz.) A large and distinct thick-set flower of good quality: trumpet rich yellow, perianth sulphur white. First-class certificate.

MRS. BUCHANAN. ($8 ea.) New; distinct and delicate shade. Petals, slightly twisted and cream white; trumpet, primrose-yellow, with nicely flanged open mouth.

MRS. C. W. EARLE. (E. 14 in. § ¶ $5 ea.) A new seedling, bearing flowers of great beauty, with broad, pure white petals, and elegantly shaped trumpet of citron-yellow.

MRS. MORLAND CROSFIELD. (B. 19 in. § ¶ $3 ea.) A magnificent new variety, blooming as early as or earlier than Horsfieldi. A large, showy and beautiful flower with long, bold, clear yellow trumpet and large, pure white petals.

MRS. WALTER T. WARE. (C. 16 in. § ¶ $1.50 doz.) Healthy, strong growing, very free flowering and early. Flower of perfect shape, with large white perianth and a well expanded golden-yellow trumpet. Beautifully recurved and frilled at the brim. Where Horsfieldi does

not thrive this should be used in its place. Award of Merit, R. B. S.

ORIANA. (C. 18 in. § ¶ $3 ea.) New; perianth white, trumpet short and broad of soft canary-yellow.

OSIRIS. (D. $100 ea.) A large, late-flowering new variety, with a bold, handsome, canary-yellow trumpet, well expanded at the mouth and elegantly crinkled; broad petals of creamy-white.

PHARAOH. (D. $100 ea.) A new, very large-flowered seedling, with creamy-white petals and a large, broadly-expanded trumpet of canary-yellow. Award of Merit at Birmingham.

PORTIA. (B. 12 in. ¶ * 50c. doz.) Dwarf, early and very free-blooming, closely allied to Michael Foster. Trumpet, yellow; perianth, soft primrose. Good substance.

PRINCE COLOBRI. ($1 ea.) A new seedling of very dwarf habit. Trumpet, deep yellow; perianth, white.

PRINCEPS. (A. 15 in. § ¶ * $2 hu.) A very good, free, early-flowering variety; very popular for cut flowers, forcing and naturalising on account of its low price; flower of good size though lacking in form and substance. Perianth, light sulphur; trumpet, yellow.

PRINCEPS MAXIMUS. *Syns: Giant Princeps, Don Quixote.* (A. 15 in. § ¶ * $2.50 hu.) A selection from the preceding and said to be a little bigger—but so little that were the labels removed no one would notice the difference.

PROSERPINE. (B. 13 in. † $1.25 doz.) A very pretty free-flowering native Spanish daffodil, resembling "cabeciras," but larger and earlier, with gracefully twisted petals of pure white, and a bold golden trumpet with an open spreading mouth.

PSEUDO-NARCISSUS. (B. 9 in. † $1.50 hu.) A species indigenous to several sections of Southwestern Europe and England. In the latter country it has long been popularly known as the "Garland Flower," and also as the "English Lent Lily." Like most native daffodils it is es-

pecially suited for naturalising. It varies considerably in form and colouring, but the commonest form has a whitish perianth and a long yellow trumpet. It is very early in flowering and may be used for forcing, pot and garden culture.

PYRAMUS. (D. $30 ea.) A new late-flowering bi-colour of distinct and elegant form. Perianth, creamy; trumpet, canary-yellow, long and slightly rolled back at the mouth. Award of Merit, R. H. S.

QUEEN CHRISTIANA. (D. 14 in. $125 ea.) New late-flowering, extra good variety of great substance, with a large, elegantly formed, bold trumpet of soft lemon colour, widely opened at the mouth and beautifully flanged. Broad, pure white perianth. Award of Merit and special medal for the best trumpet daffodil in the Show at Birmingham.

QUEEN ISABELLA. (B. 12 in. § ¶ $2.50 ea.) A new seedling with pointed white petals and an elegantly shaped and frilled trumpet of cream and canary-yellow.

RHEA. (D. $3 ea.) New; good form and great substance. Perianth, white; trumpet, golden-yellow.

SCOTICUS. (A. † $2 hu.) The Scotch garland flower. A dwarf, extra early flowering native, thriving when naturalised in grass or shaded localities, but often disappointing in the cultivated garden, though it frequently forces well. The flower is bold in outline, with whitish perianth and rich yellow trumpet, serrated and flanged at the brim.

SENTINEL. (§ ¶ * $2.50 doz.) A charmingly effective, strong-growing bicolor for bedding, the flowers just topping the foliage. Pure white petals, broad and spreading; trumpet, clear yellow, short but well expanded and flanged at the mouth.

SILVER SPUR. (A. $3 doz.) Newly introduced and said to class among the bicolors as Golden Spur in the all-

yellows. As early as Golden Spur. Perianth, nearly white; trumpet, long and yellow.

TUSCAN BICOLOR. († § $1.50 doz.) An extra-early type from Italy; does well in grass, and excellent for pots.

VICTORIA. (B. 18 in. § ¶ $1 doz.) A comparatively new variety, bearing immense flowers of ideal form and unsurpassed substance. When flowered under glass it is even more beautiful than when grown in the open. It forces easily and is earlier than any other high-class bi-colour. As a pot plant it is most effective, the flowers being carried erect on tall, stiff stems, gracefully topping the foliage. The petals are of remarkable breadth, creamy white out of doors, but snowy white under glass; the bright yellow trumpet is very large and broad, beautifully flanged and frilled at the mouth. A variety of great merit, strong and healthy in growth, a free bloomer, and especially noted for its vanilla-like perfume. Award of Merit, R. H. S.; certificate of merit, R. B. S.

WEARDALE PERFECTION. (D. 24 in. § ¶ $5 ea.) A new seedling, the largest and most beautiful bi-colour. Some blooms of this daffodil have been exhibited measuring five inches across. Well proportioned, large white petals and an immense sulphur trumpet. First-class certificate, R. H. S.; Premier prize as the "Finest Daffodil" at Birmingham; Floral certificate at the Daffodil Conference, and numerous other awards.

CHAPTER XI

The Lesser Trumpet, Hoop Petticoat and Cyclamen-Flowered Daffodils

The grouping together of the sections Humei, Backhousei, Bulbocodium, with cyclamineus, Johnstoni and triandrus is done for convenience.

The varieties of the two first named sections often have a character in common in the "clipped off" trumpet; but on the other hand the true Backhousei type is almost inseparable from the large trumpets except that the flower as a whole is smaller.

NARCISSUS HUMEI

"Hume's Dog-Eared Daffodils" are garden hybrids, some people say, between *N. Pseudo-Narcissus* and *N. montanus,* others claim between *N. incomparabilis* and *N. Pseudo-Narcissus.* But whatever the parentage of the Humei type may be, the flowers, if not very beautiful, have the merit of distinc-

tiveness of form, so precious to the collector of varieties. The flowers are nodding and have a straight crown or trumpet of "clipped off" appearance and about one inch long—with loosely-flopping petals about half as long again as the crown—from which the suggestive name of "dog-ear" originated. All of the varieties of this type are admirably adapted for beds, borders and naturalising.

HUMEI ALBIDUS. (¶ * $1 doz.) Small flowers with sulphur white perianth petals and a lemon-yellow crown.

HUMEI CONCOLOR. (C. 15 in. § ¶ $1.50 doz.) Perianth and crown of uniform light yellow.

HUMEI MONSTROSUS. *Syn: Hume's Giant.* (B. 12 in. § ¶ 75c doz.) A larger flower with yellow petals changing to sulphur colour which overhang the deeper yellow straight trumpet.

THE LEEK. (D. 19 in. § ¶ * $1 ea.) A new variety with creamy-white pointed perianth petals overhanging the straight rich yellow trumpet; foliage broad and drooping.

NARCISSUS BACKHOUSEI

A small group with trumpet shaped crowns, a connecting link between the large trumpet daffodils and the medium-crown or cup types, though they are usually classed in the latter section. The whole flower is comparatively small for a trumpet daffodil.

The original type was raised by Mr. W. Backhouse in whose honour the group is named. One parent was undoubtedly *N. Pseudo-Narcissus* but it is disputed whether the other was a Tazetta or incomparabilis variety. Backhousei forms have been raised by crossing Ajax bicolor with poeticus. They are all suitable for pot culture, garden beds, borders and naturalising.

BACKHOUSEI (the type). (C. 17 in. § ¶ $1.50 doz.) A distinct hybrid, with a pure yellow, stout trumpet-shaped crown, well expanded reflexed petals of a sulphur-yellow; a bold, handsome lasting flower.

WILLIAM WILKS. (C. 15 in. § ¶ 50c. doz.) Quickly described as an Ajax bicolor, with a shortened trumpet of striking orange-yellow. The trumpet is well expanded, has a beautifully frilled brim. The perianth petals are broad, spread well and are cream-white in colour; excellent cut flower; foliage, broad and massive.

WOLLEY DOD. (B. 18 in. $2.50 doz.) Large, spreading, cream-yellow petals and a short, deep yellow crown; a very distinct and excellent form.

THE HOOP PETTICOAT DAFFODILS

A small well characterised dwarf group with rush-like leaves and flowers having a very wide-mouthed trumpet, that in form recalls the old-fashioned crinoline; petals nar-

row and of comparative insignificance. They are all varieties of the one species: *N. Corbularia* or *Bulbocodium,* indigenous to the south of France, Spain, Portugal, Algeria and Morocco. Suitable for rockwork and edgings, or for grouping in the foreground of the herbaceous border; but when forced in pots and pans they are truly beautiful. Easily grown from seed, which is freely produced, flowering in about three years from sowing. Give a gritty or sandy, well under-drained loam.

BULBOCODIUM CITRINUM or CITRINUS. (C. 6 to 8 in. § ¶.) 75c doz.) The large yellow "Hoop Petticoat"; rich golden-yellow flowers.

BULBOCODIUM CITRINUM or CITRINUS. (C. 6 to 8 in. § ¶.) The large sulphur "Hoop Petticoat", pale lemon yellow flowers.

BULBOCODIUM PRAECOX. (B. 6 in. § ¶ $1 doz.) The early yellow "Hoop Petticoat". In favored locations this flowers out-of-doors in February.

BULBOCODIUM MONOPHYLLUM or MONOPHYLLA. *Syn: Clusii.* (A. 6 in. § ¶ $1 doz.) The White Hoop Petticoat. Extra early and especially adapted for winter flowering in pots, it also flourishes in sunny nooks in rockwork or sandy soil. The snowy white flowers are of exquisite beauty.

BULBOCODIUM MINIATURE. (B. 3 in. § ¶ $2.50 doz.) A very rare variety growing only 3 in. in height bearing diminutive yellow flowers.

THE CYCLAMEN FLOWERED DAFFODILS—CYCLAMINEUS, JOHNSTONI AND TRIANDRUS

These three family groups—*N. Cyclamineus, N. Johnstoni and N. triandrus*—are included under the one heading because the flowers of all are distinguished by reflexed petals that liken them to the flowers of the cyclamen. That the three groups are closely related is indicated by the fact that *N. cyclamineus* is a sub-species of the Portugese form of *N. Pseudo-Narcissus,* and the typical forms of *N. Johnstoni* are natural hybrids between the latter and *N. triandrus* which is also a wild Spanish and Portugese daffodil. The proper classification of these varieties has been and is still much discussed and the placing of them in one garden group seems to be the logical situation. *N. triandrus* has rush-like leaves.

CYCLAMINEUS. (A. 6 in. § † ¶ $1 doz.) The yellow cyclamen-flowered daffodil. This dwarf, dainty little variety was lost to cultivation for nearly 300 years—but was rediscovered in Portugal in 1887. It grows only 6 inches high, bearing small drooping flowers of rich yellow and as shiny as gold. The tubular trumpet, about one inch long, is topped with turned-back petals in cyclamen-like form.

It is the earliest of all daffodils to bloom and is worthy of a place in every collection for its peculiar and distinctly characteristic flowers. It may be grown in pots, for edgings to beds, or in well-drained pockets of rockwork. It is especially valuable for naturalising in shaded places, but it must have a moist, well-drained soil. First class certificate R. H. S.

CYCLAMINEUS, var. MAJOR. (A. 6 in. § ¶ $1.25 doz.) This is supposed to be a larger flowering form of the preceding—but I have found no difference between them.

JOHNSTONI. A wild type found in Portugal and Spain, supposed to be a natural hybrid between some Ajax and Triandrus (Angel's tears). But whatever its parentage, Johnstoni is a very pretty though diminutive daffodil with a funnel-shaped trumpet about one inch long and reflexed (turned back) petals which place it among the cyclamen-flowered class. In its wild form it varies somewhat in shape and size and also colour, the latter ranging from cream to lemon-yellow. I do not know that any stock of bulbs as collected are offered for sale—but selections from the wild are to be had under the names of "Queen of Spain" and "Mrs. George Cammell." There are also several artificial or garden hybrids including those enumerated below but none yet in commerce, viz:

Johnstoni Countess Visconti
" Countess Grey
" Count Viscounti
" Cyprian
" Dorothy Kingsmill
" Earle Gray
" Elenor Berkeley

JOHNSTONI, "QUEEN OF SPAIN." (B. 12 in. † § ¶ $1.25 doz.) A superior selection from the varied wild forms of Johnstoni. A small but beautiful and distinct flower, droopingly poised just above the blue-green foliage. Its

colour is soft-yellow throughout; the trumpet, short and slightly expanded, is topped with perianth petals that turn back like those of a cyclamen. It is attractive in garden beds, and naturalised in shaded places under trees—its effect when in masses is not surpassed by any daffodil in cultivation. It lasts long in bloom and is a good cut flower.

J. T. BENNETT POE. (15 in. $25 ea.) A beautiful new hybrid of robust constitution: perianth petals of cream colour; trumpet of canary-yellow—straight and elegantly outlined.

TRIANDRUS. *Syn: Ganymedes.* These small rush leaved daffodils, popularly known as "Angel's tears," are found wild in the mountains of Portugal and Spain, where they grow usually in the fissures of rocks. The flowers are small, with bell-shaped crowns and reflexed petals, reminding one of cyclamen flowers. For pot culture, several bulbs to a pot, they are well adapted, also for rock work and naturalising, always thriving in shaded locations and in gritty, well drained soil. The varieties are:

TRIANDRUS ALBUS. (C. 7 in. § ¶ 75c. doz.) The white cyclamen-flowered daffodil: creamy white.

TRIANDRUS CALATHINUS. (C. 7 in. § ¶ $1 ea.) Flowers larger and distinct from Albus, and snowy white.

TRIANDRUS CONCOLOR. (C. 7 in. § ¶ 50c ea.) Soft yellow throughout, beautiful.

TRIANDRUS PULCHELLUS. (D. 9 in. § ¶ $2 ea.) Corona white; petals, primrose; rare and exquisite, slightly later, taller and larger than the others.

CHAPTER XII

The Medium-Crown Hybrids

This is a most important group, adapted to the broadest ranges of cultivation and embracing some of the best varieties for cutting and for naturalising.

NARCISSUS INCOMPARABILIS

This is one of the most important sections of the medium-crown group. The type, wild over a large area throughout South-western Europe, was long considered a species, but comparatively recent proofs including artificial crosses between *N. Pseudo-Narcissus* and *N. poeticus* which reproduced the identical plant and flower, have caused *N. incomparabilis* to be generally recognised as a natural hybrid. There are now many varieties—mostly garden crosses. The distinguishing characteristic is a cup-shaped crown, one-third to three-quarters the length of the petals.

Practically all the varieties may be depended upon for any purpose; they make charming pot plants and are graceful and unexcelled as cut flowers, showy for beds and borders and most effective for naturalising. The richness of colouring in the cup varies according to season and conditions of soil and exposure.

AMSTERDAM. ($1.50 hu.) Narrow, white petals; cup, large, of an orange cast, stained reddish.

ARTEMIS. (D. § ¶ $1 doz.) A strong, tall grower, with handsome flowers, broad perianth petals of white; expanded yellow cup.

AURANTIUS. *Syn: Incomparabilis simplex.* (* $1 doz.) One of the type selections from the native *N. incomparabilis* An early free-flowering variety with sulphur-yellow petals and a yellow and orange crown. Splendid for naturalising and good for cutting. The double-flowering form of this (aurantius plenus) is well known under the catalogue name of Golden Phœnix, and the popular name of "Butter and Eggs."

AUTOCRAT. (C. 20 in. * ¶ 50c. doz.) A rich self yellow with wide petals and a broadly expanded cup, tinged scarlet at the mouth.

BEAUTY. (D. 23 in. § ¶ * 75c doz.) One of the best varieties in the group. A strong grower and free bloomer, producing bold, handsome flowers on long stems. Perianth light yellow, with darker yellow bars shading each petal; cup, very large, well expanded, deep, rich yellow, stained reddish orange. Unsurpassed as an exhibition variety, and should be largely grown as a cut flower. It is also most

effective in garden and when naturalised. Award of merit, R. H. S. Certificate of merit, R. B. S.

BERTIE. (C. 15 in. ¶ * $1 doz.) A bold, showy flower with broad, creamy-white perianth petals, and a deep yellow cup bordered orange. A good cut flower, and fairly early.

BLACKWELL. (A. ¶ * $1 ea.) A new variety and the earliest of all narcissus, excepting the small N. minor and N. minimus. It commences to flower by the middle of March and holds its beauty for a month. The flower is bold and handsome. Perianth petals, cream-yellow; cup straight, deeply fluted, rich yellow, stained orange scarlet.

CANARY QUEEN. (D. 21 in. $1 ea.) White petals; crown, canary-yellow, edged with apricot.

CARDINAL. (B. 18 in. $1 ea.) A new seedling of robust growth. Petals, white; crown, large and coloured vivid orange clear to the base.

C. J. BACKHOUSE. (C. 20 in. ¶ † $1.50 doz.) Though named in honour of the daffodil enthusiast, this should not be confounded with the "Backhousei" section, for this variety is a typical incomparabilis and one of the best of the class. The flower is most attractive and distinctively coloured: crown, much elongated, rich orange-yellow, tinged reddish; petals, yellow, medium size. It prefers cool soil in a half-shaded situation. First class certificate, R. H. S.

COMMANDER. (D. 18 in. § ¶ * $2 doz.) Very large and beautiful flower, not unlike Sir Watkin. Petals, pale sulphur-yellow; cup, large and broad, rich yellow stained orange red. Strong growing, late flowering. Floral certificate, Daffodil Conference.

CONSTELLATION. (C. 20 in. § ¶ * $5 doz.) Large and beautiful flower, with broad white petals, and a bright yellow cup, tinged orange at the mouth and prettily crimped at the brim; a tall, strong grower.

CYNOSURE. (C. 18 in. ¶ * $1.50 hu.) Very satisfactory, free-flowering, low-priced variety; extensively grown for

market flowers and most popular for naturalising in grass. The flower, of fair substance, is of first-class size and form. Creamy-white perianth and yellow cup, suffused orange. Splendid for cutting in quantity.

DANDY DICK. (B. § ¶ * $4 ea.) New. A showy, bold flower of good substance. Petals, shortened, broad, cream-yellow; crown, well expanded, prettily crimped at the brim, bright yellow, with a deep showy orange-red margin.

DOCTOR GORMAN. ($1.50 doz.) Well expanded, pure white petals, and a rich primrose, beautifully crimped crown.

FEARLESS. ($50 ea.) A new, giant incomparabilis, with broad, smooth petals of white, and a bold, rich yellow crown, prettily fringed at the brim. Award of Merit, Birmingham.

FIGARO. ($1.50 hu.) An old but still popular variety, producing large flowers with spreading light yellow petals and a much expanded cup, yellow, shaded orange.

FRANK MILES. (C. 22 in. § ¶ * 50c. doz.) Distinct, with large flowers. Petals, soft yellow, gracefully twisted. The cup, clear yellow. A charming flower for cutting, and exceedingly effective when grown in masses.

GAIETY. (E. 16 in. $2.50 ea.) A new variety with long tapering perianth petals of soft canary-yellow; crown, straight, fluted, brilliant orange.

GEORGE NICHOLSON. (D. 17 in., $1.50 doz.) Vigorous, large, late flowering. Perianth, pure white; cup, clear yellow. A flower of good form and unusually lasting substance.

GIPSY LAD. (§ ¶ * $2 ea.) A desirable new variety, producing bold, showy flowers with broad, well formed petals and a large, pure yellow crown, heavily margined with fiery orange-red.

GLORIA MUNDI. (D. 18 in. § ¶ $1 ea.) New. Really glorious flowers. Petals, bold, rich, bright yellow; crown, very large, well expanded, rich deep orange, suffused red.

Without doubt the best of the yellow incomparabilis type, whether for exhibition, for the garden or for cutting. A strong, vigorous grower, but late in flowering. First-class certificate, R. H. S. and Midland Daffodil Society.

GOLIATH. (D. 18 in. *¶ $1 doz.) A handsome, large, late-flowering variety, with broad, white petals and large yellow cup.

GWYTHER. (C. 17 in. ¶ *$2.50 hu.) Beautiful and showy for borders and for cutting. Large, broad yellow petals, with a large yellow cup, suffused orange.

HOGARTH. (C. 20 in. $1.50 doz.) A quaint flower, with a very large yellow cup, much expanded and gathered; petals, yellow and gracefully twisted.

JAMES BATEMAN. (D. 22 in. ¶ *75c doz.) Late, a graceful flower of good substance and best form. Petals broad, pure white; cup clear yellow.

KING OF THE NETHERLANDS. (C. 20 in. ¶ *75c doz.) Distinct and extra good. Petals sulphur coloured; cup large; spreading, yellow stained orange.

LADY ARNOTT. ($6 ea.) A beautiful flower similar to but larger than C. J. Backhouse; perianth yellow, cup yellow, tinged red.

LADY MARGARET BOSCAWEN. ($20 ea.) A new giant flowered seedling that might be called a "bi-colour Sir Watkin," the flower being of large size with broad, snowy white petals and a large, expanded crown of golden yellow. First-class certificate, R. H. S.

LOBSTER. (B. 18 in. $1 ea.) A new and showy early flowering kind with deep yellow petals and an orange cup, stained red.

LOUISE. (D. 15 in. § ¶ $1 ea.) A handsome late flower of great substance; round, broad petals and a bold canary-yellow cup, tinged orange-red. The cup is prettily crimped at the brim.

LUCIFER. (B. 18 in. ¶ $2 ea.) A splendid new Irish seedling. Early, free flowering and a strong grower.

Large handsome white petals; cup intense orange-red, very striking. First-class certificate, R. H. S. and Midland Daffodil Society.

LULWORTH. *Syn*: *Lulworth Beauty.* (14 in. 50c ea.) A real gem when perfect, but some seasons the cup has an inclination to split. Perianth pure white, cup orange-red, sometimes almost scarlet. First-class certificate, R. H. S.

LYDIA. ($2 doz.) New. Elegant flowers borne two to four on a stem, the white petals gracefully curved: cup cream, shaded orange-red.

MABLE COWAN. (D. 20 in. ¶ * $1.50 doz.) A profuse blooming late sort—a beautiful flower of lasting substance. Splendid for cutting. Perianth white; cup broadly margined orange-scarlet. Floral certificate, Daffodil Conference.

MAGOG. (C. ¶ * 75c doz.) Well known among those who grow flowers for market. The discriminating collector however chooses Sir Watkin instead. The flower of Magog is of good size and form with cream-yellow perianth and sulphur yellow cup. It does well naturalised in grass.

MARY ANDERSON. The single form of Orange Phoenix, popularly known as Eggs and Bacon. Flower of medium size, perianth pure white, cup deep orange suffused reddish.

MARS. (B. 18 in. § ¶ $5 ea.) A new variety of strong, tall growth and free-flowering qualities. Broad, white petals and large, open, orange-red crown.

PERFECTUS. (D. 21 in. § ¶ 50c ea.) A late flower of charming symmetry and great substance having well-formed stiff white petals, and an expanded cup of canary-yellow, slightly suffused orange.

PRINCE OF TECK. (D. 18 in. § ¶ $1 doz.) A late flower with broad, well-formed, imbricated creamy-white petals and a large, expanded yellow cup.

PRINCESS MARY. *Syn*: *Princess Mary of Cambridge.* (C. 16 in. § ¶ $1 doz.) A well-known mid-season variety of high merit, producing flowers of perfect form. Petals creamy-white, broad and spreading; cup yellow suffused reddish-orange, large and expanding. Distinct and beautiful. First-class certificate, R. H. S.

QUEEN BESS. (A. 15 in. § ¶ * 75c doz.) The earliest to bloom among the incomparabilis. Very popular for early forcing; large, broad, white petals; cup lemon-yellow, much expanded.

QUEEN CATHERINA. (B. 18 in. § ¶ * $2.50 doz.) A new, early and meritorious variety, a strong grower and free bloomer, often producing two flowers on a stem. Reflexed petals creamy-yellow, and large bright yellow open cup, suffused orange. The cup is prettily crinkled at the mouth. Strong foliage, deep blue-green. A valuable bedder.

QUEEN SOPHIA. (C. 18 in. $5 doz.) An old reliable variety thriving best in stiff loamy soil. Petals sulphury white; cup yellow, expanded, frilled at the brim and stained orange-red. First-class certificate, R. H. S.

RED STAR. (E. 14 in. $5 doz.) New. Extra late in flowering and valuable for succession. Like most late flowers it surpasses the average in size and substance. Petals creamy white, elegantly arched; long straight cup, yellow stained brilliant red. Free flowering and very showy.

SEMI-PARTITUS. (D. 17 in. $2 doz.) An old, distinct and interesting variety with a pale primrose perianth and deeply lobed (imbricated) light yellow cup.

SIR WATKIN. (B. 21 in. § ¶ * 50c doz.) This Welsh giant is one of the best, largest and freest bloomers of the incomparabilis section; it is also very early. When well grown the flowers measure five inches across; the wide-spreading petals are pale yellow; the cup bright yellow, and frequently tinged orange near the mouth; a healthy strong grower with long stemmed flowers of good sub-

stance. The connoisseur may claim the flower is a little gross and coarse—but for large flowers and plenty of them it is valuable for cutting, lasting well in water. It forces easily, does well in pots, is very showy when massed in garden beds and borders, and for naturalising in grass it has few equals. It makes large bulbs which multiply rapidly from offsets.

STEADFAST. ($5 ea.) A new giant of excellent substance and handsome form. Petals white, crown cylindrical, and of rich yellow.

STELLA. (C. § ¶ * $2 hu.) A well-known variety, popular for forcing, open ground planting and naturalising on account of its low price, being grown by thousands for cutting purposes. It is a reliable bloomer, fairly early. Charming medium-sized flower, with pure white petals and lemon-yellow crown.

STELLA SUPERBA. (C. 20 in. § ¶ * 75c doz.) A new and splendid introduction, great improvement over Stella, the flowers being as large again and of great substance, borne on long stout stems, splendid as cut flowers. Large spreading clear white petals; cup large, well expanded, bright yellow. A free bloomer, strong grower, effective bedder, and also does well naturalised.

STARLIGHT. ($1.25 ea.) One of the most brilliant of this section, the bright orange crown contrasting well against the white perianth. Very free-blooming, averaging three to five flowers on each stem.

SWEETHEART. (C. 15 in. $1.50 ea.) This new variety was originally introduced in 1901 as Phyllis, but that name having been given to both Leedsii and Tazetta varieties the "incomparabilis Phyllis" was withdrawn. It produces large and beautiful flowers with white petals and a straight canary-yellow crown beautifully fluted and flanged at the brim.

THE RIVAL. (C. 18 in. $3 ea.) New seedling. Symmetrical round form; petals broad and over-lapping, pale

canary-yellow. Crown fluted at the brim and edged orange-red.

TITIAN. (B. 18 in. § ¶ * $2 hu.) Early, large and well formed, with yellow petals and a yellow cup stained orange-red.

TORCH. (¶ * $3 ea.) New and very showy. Large yellow petals, gracefully twisted: very large crown, yellow suffused fiery orange-red. Award of Merit, R. H. S.

TRIUMPH. ($5 ea.) Flowers almost as large as those of Sir Watkin but later and of more perfect form and greater substance. Pure white petals; very large deep yellow crown.

VESUVIUS. (15 in. ¶ * $2 doz.) A good grower and free bloomer; sulphury-white petals; cup, glowing orange, tinged reddish.

WHITE WINGS. (§ ¶ $1.50 ea.) Broad round pure white petals; crown, clear yellow. Award of Merit, R. H. S.

WILL SCARLETT. (¶ * $20 ea.) A new and strikingly attractive flower. The fiery orange-red colouring of the wide-mouthed crinkled cup is remarkable, perianth rather weak, creamy white. First-class certificate, R. H. S.

NARCISSUS NELSONI

Garden hybrids, the parentage of which seems to be Ajax bicolor and *N. poeticus*. They are aptly described as "shortened trumpet bi-colours," having white petals and goblet-shaped crowns more than half the length of the petals.

Late flowering and therefore highly prized for succession. Suitable for beds and bor-

ALL-WHITE TRUMPET DAFFODIL

Madame De Graaff, one of the most important of the white trumpet varieties. Remarkably sturdy, growing sixteen inches high. On first opening, the trumpet is faintly tinged with a shade of primrose

MEDIUM-CROWN, OR CUP DAFFODIL N. INCOMPARABILIS

Sir Watkin, a most popular large-flowered variety of the medium-crown group for bedding, for cut flowers and for forcing. Early, very sturdy and taller than the average. Perianth rich yellow, cup rich sulphur tinged orange.

ders, for naturalising and for pot culture, 3 to 5 bulbs in a five-inch pot. As cut flowers they are especially valuable, lasting a long time in water.

AURANTIUS. *Syn: Nelson's Orange.* (D. 12 in. 50c ea.) A distinct flower, one of the best shapes in the section; the pure white perianth is broad and flat: the long crown bright yellow suffused with orange-red is well expanded and fluted. First-class certificate, R. H. S.

NELSONI MAJOR. (D. 16 in. § ¶ * 50c doz.) Late flowering variety with a rather long cylindrical golden-yellow crown, suffused with orange on first opening. Petals pure white.

NELSONI MINOR. (D. 12 in. † $1 doz.) The small form of Nelsoni Major. Dwarf small, snow-white perianth; crown deep yellow, the pistil projecting beyond the brim; excellent for naturalising.

MRS. C. J. BACKHOUSE. (D. 12 in. § ¶ * 75c doz.) Superb. Massive broad white petals and a clear yellow well-expanded crown. First-class certificate, R. H. S.

MRS. KNIGHTS. (E. ¶ * $2 ea.) New seedling, very late. Broad white petals and a broad bright yellow crown.

PULCHELLUS. (D. 15 in. ¶ * $1.50 doz.) A beautiful drooping flower with imbricated campanulate perianth of pure white and a light yellow crown.

RESOLUTE. (D. 13 in. § ¶ 75c ea.) New. A bold, pendulous flower. Perianth broad and of creamy-yellow, long straight crown of clear yellow. A strong grower and free bloomer.

STRONG BOW. (D. 11 in. § ¶ $2.50 ea.) A new and sturdy variety with broad thick foliage. The flower of great substance has broad snowy-white petals, and a large well-expanded rich-yellow crown. Award of merit, Birmingham; award of merit, R. H. S.

WILLIAM BACKHOUSE. (D. 15 in. § ¶ $2.50 hu.) A good late flower. Petals white and broad: cup clear yellow. First-class certificate.

NARCISSUS LEEDSII

Popularly known as the "white star narcissus," "eucharis-flowered narcissus," and "silver-winged narcissus." The predominating characteristics are white, spreading, star-like perianth, and white or pale sulphur yellow cups. As now understood this section comprises not only the typical Leedsii hybrids but the white and sulphur cupped incomparabilis and Barrii forms, having white petals.

Leedsii varieties are produced from crossing white Ajax varieties with *N. poeticus*. From the first mentioned parent they inherit the graceful pendant carriage of the flower, and from the latter their constitution and robustness. They embrace some of the most generally useful varieties.

The sweetly perfumed flowers are highly decorative in vases and bouquets. Grown in pots (3 to 5 in a five-inch pot) the Leedsii varieties flower well, and in beds and borders they are most charming; excellent also when naturalised in quantity.

AGNES HARVEY. (D. 13 in. § ¶ $8 ea.) A beautiful new late-flowering seedling having some N. triandrus blood in it, which probably accounts for the flowers sometimes coming three on a stem. Petals pure white and of exquisite form; cup widely open at the mouth, pure white though sometimes flushed with rosy apricot. Award of merit, R. H. S.

AMABILIS. (B. 13 in. * ¶ $2 hu.) Early and very free flowering, large pure white spreading petals and a long lemon-coloured crown toning off to silvery white.

AMAZON. (§ ¶ $2.50 ea.) A remarkably beautiful flower of splendid substance and form. Petals pure white, crown lemon-yellow. Robust in growth and free flowering, often producing two flowers on a stem.

ARIADNE. (C. 15 in. § ¶ $2.50 ea.) New and of striking beauty. Cup ivory white, very large, saucer shaped, spreading wide at the mouth and prettily frilled. Perianth white. Awards of merit, Birmingham, Truro, Plymouth and R. H. S.

BEATRICE. (C. 16 in. § ¶ * $1.50 doz.) One of the handsomest and most distinctive flowers in the section. Snowy white perianth of graceful campanulate form; cup globular flesh colour tinted white.

BIANCA. ($50 ea.) A new seedling of beautiful form. Perianth broad and of pure white, the goblet-like, prettily fluted crown is bright canary-yellow with a green eye.

BRIDAL VEIL. (C. § ¶ * $2 ea.) New. Gracefully twisting snowy white petals. Long globular creamy white cup. A beautiful drooping flower.

BRIDESMAID. (C. 20 in. § ¶ * $3 doz.) A large and beautiful flower with a fairly broad campanulate pure white perianth, and a large globular cream white cup well-expanded at the brim.

CONSTANCE PIERPONT. (B. 22 in. § ¶ $2.50 doz.) Very early. Strong growth. Perianth pure white; cup pale yellow well-expanded at the brim.

DELOS. (B. 24 in. § ¶ $2.50 doz.) An early, tall, and vigorous grower: gracefully twisted pure white petals; cup citron-yellow at the base. It flowers in perfection for several weeks.

DIANA. (17 in. $15 ea.) A new giant flowered form with broad, white, slightly reflexed petals and a large expanded crown of soft canary-yellow. Award of merit, R. H. S.

DUCHESS OF BRABANT. *Syn: Circe.* (C. ¶ * $1.50 hu.) A popular free-flowering dwarf variety often grown in quantity both for cutting and naturalising. In grass it thrives as well as N. poeticus, charming medium-sized flowers sometimes borne two or three on a stem. Petals white, small canary cup.

DUCHESS OF WESTMINSTER. (D. § ¶ * $1.50 doz.) This Queen of the Leedsiis is a comparatively new variety, producing immense handsomely formed flowers on strong stems. The petals of pure white are very large, spreading and taper prettily to a point; the long cup on opening is canary tinged with orange, but this colouring soon passes off to almost white. Excellent for pots, flower beds, borders, cutting or naturalising. Late flowering. First-class certificate, R. H. S.

ELAINE. (17 in. $3 ea.) New and very beautiful, with a broad silvery white perianth and a globular fluted crown of white, shaded towards the base with citron-yellow. First class certificate R. H. S.

ENID. (§ ¶ * $10 ea.) New, in the way of Mrs. Langtry but a decided improvement. Large snowy white perianth and long straight sulphury-white crinkled crown. Tall.

EOSTER. ($15 ea.) A new seedling, producing large flowers of perfect form. Perianth white of much substance. Crown globular shaded lemon yellow. Award of merit, R. H. S.

FAIRY QUEEN. (16 in. § ¶ $2.50 doz.) A remarkably

NARCISSUS BARRII CONSPICUUS

One of the most beautiful and generally useful varieties of the medium-crown, or cup daffodils. Equally suitable for cut flowers or for growing in the garden border and when cut lasts longer in water than most other varieties. Late. Yellow perianth; cup yellow, conspicuously edged with orange-scarlet

THE HOOP-PETTICOAT DAFFODILS

The flowers are practically all trumpet and no petals. Best suited for rockeries or for growing in pans in the cool greenhouse. The leaves are rush-like and the flowers range from yellow to sulphur white (*N. Bulbocodium*)

free-flowering strong-growing new variety with a pure white perianth and a straight, broadly expanded and fluted creamy white cup.

GEM. (C. § ¶ $2 doz.) One of the best of the section. Petals broad and white as snow, the cup also is pure white.

GRAND DUCHESS. (B. § ¶ * 60c doz.) A new early with white spreading petals and broad white cup at first stained rosy orange: A prize cut flower.

HEROINE. ($125 ea.) A new giant in this section with large broadly spreading pure white petals and a large, broadly expanded and crinkled crown of citron-yellow distinctly edged with apricot-orange.

HON. MRS. BARTON. (15 in. § $2 doz.) Very distinct and handsome. Rather delicate on some soils—but a prize where it succeeds. Perianth large and broad, purest white; cup expanded, and passes from cream to white.

JANET IMAGE. (A. 16 in. § ¶ * $40 ea.) A new giant remarkably early. Perianth white, large straight crown of lemon-yellow. Award of merit, R. H. S., also at Truro and Birmingham.

KATHERINE SPURRELL. (D. § ¶ * $2 doz.) One of the most beautiful, especially as a cut flower. Flower large, well formed, with broad overlapping petals pure white, and a light lemon-yellow cup.

LEEDSII. (B. 15 in. ¶ * $1.50 hu.) The type; raised by a Dr. Leeds, in honour of whom the whole section is named. This variety though superseded by better sorts, is still popular with many on account of its earliness and free-flowering qualities. Silvery white star-like flowers. Very fragrant.

LADY MCCALMONT. (26 in. § ¶ $4 ea.) A tall vigorous-growing Irish variety with large flowers four inches across of very lasting quality. Petals twisted and fluted, pure white; the broad crimped cup is white, rimmed with pale citron. Remains in flower for six weeks. Immense bulbs.

LADY GREGORY. Another vigorous Irish variety with massive leek-like foliage. The flowers, of lasting substance, have pure white petals and pale yellow cup, well expanded and mitred at the brim.

LORD PALMERSTON. *Syn: Palmerston.* (D § ¶ * 50c doz.) A charming late-flowering variety, with broad spreading white petals and an elegant canary coloured cup. Delightfully fragrant.

LUCIA. (16 in. $10 ea.) Resembling Katherine Spurrel but said to be much better, which is high praise indeed. The petals of Lucia measure four inches from tip to tip and are of pure white; Crown straight, prettily fluted and of citron-yellow. New.

MADGE MATTHEW. (B. 18 in. § ¶ * $1.50 doz.) A very distinct early flowering variety with deep blue-green foliage: large snow white perianth and white cup. Very effective when grown in masses in the garden or naturalised.

MAGGIE MAY. *Syn: Edmond's White.* (D. 22 in. § ¶ $15 ea.) New, late flowering and one of the best in the section, producing flowers of great size. White perianth, and a very large pale citron coloured cup, beautifully frilled at the mouth. Strong grower. First-class certificate, R. H. S. First-class certificate at Birmingham.

MARY MAGDALINE DE GRAAFF. (D. § ¶ * $1 doz.) Often catalogued as Mary M. or M. Magdaline or M. M. De Graaff. A distinct late-flowering, free-blooming Leedsii with broad white imbricated petals and a broadly expanded cup of cream yellow, often suffused with orange or terra-cotta colour. Usually bears two flowers to a stem. Very effective and highly scented.

MINNIE HUME *Syn: Queen of Holland.* (C. § ¶ * 30c doz.) Distinct and beautiful. Large and broad pure white petals and a widely expanded pale lemon cup, rimmed at first with a deeper shade, but eventually passing to pure white. First-class certificate, R. H. S.

Miss Weisse. (B. 20 in. $4 doz.) One of the earliest of the section. Vigorous grower, with rather pendulous flowers, sweetly perfumed. Petals pure white and much channelled; cup pale citron.

Mountain Maid. (C. 15 in. § ¶ * $1 ea.) Although recent it is already a great favourite; a flower of graceful drooping habit with broad snowy white petals and a pure white cup.

Mrs. Langtry. (D. § ¶ * $2.50 hu.) One of the best. Remarkably free, late-flowering variety generally bearing several flowers to a stem and two or more flower stems to a bulb. The pure white petals are very wide, and the large wide-mouthed cup opens canary-yellow but soon changes to white. Sometimes, but not always, edged distinctly with bright yellow. This lovely narcissus should be grown in quantity for its effect in the garden border and also where cut flowers are desired. First-class certificate, R. H. S.

Niobe. (20 in. ¶ * $1.50 ea.) A distinct drooping flower strongly perfumed. Petals of pure white tapering to a point and gracefully twisted, and much grooved: cup pale citron and beautifully mitred at the brim.

Peach. (C. 13 in. § ¶ * $1 ea.) This with Salmonetta at present comprise the apricot crowned Leedsiis. A new break in colouring. Peach produces flowers of remarkably good quality and beauty. Perianth pure white and slightly shouldered. Crown apricot-orange long, straight, prettily fluted.

Phyllis. ($1.50 ea.) Large pure white petals; straight fluted crown of canary-yellow, shaded amber.

Princess Maude. (B. § ¶ * $1.50 ea.) Has a short, broad, rather campanulate white perianth with a large globular cream-coloured crown. New.

Princess of Wales. (D. § ¶ * $1 doz.) A small star-like silvery white perianth but a very large cup, spreading and elegantly frilled: A late-flowering gem.

SALMONETTA. (D. 14 in. § ¶ * $3 ea.) A remarkably distinct and beautiful break in the Leedsii family. This, with "Peach" form a new branch known as the "Apricot-Crowned Leedsiis." Salmonetta has almond shaped clear white petals and a well opened prettily fluted cup of orange passing off into peach; a distinct and remarkable colouration. Award of Merit, Birmingham.

SUPERBUS. (75c doz.) White petals drooping over the long creamy yellow crown.

SYLVIA. (D. 18 in. $2.50 ea.) A dainty pendant flower with gracefully twisted pure white petals and a small cup of white flushed with peach.

THE SISTERHOOD. (D. 20 in. § ¶ * $2.50 ea.) New; vigorous and floriferous, often bearing two and three flowers on a stem. A distinct and attractive flower with white petals and fluted cup of pale buff, changing to white.

UNA. (D. 18 in. § ¶ * $2.50 ea.) A new and exquisite flower of great size; large cream-white petals and long straight crown of bright citron. A vigorous grower and free late bloomer.

UNDINE. ($25 ea.) A remarkably new seedling, with a snowy white bell-like perianth and a straight deeply fluted crown of creamy-white.

WHITE LADY. (§ ¶ * $1.50 ea.) Perfect form; broad white petals and a crinkled pale canary cup. Award of merit, R. H. S.

WHITE QUEEN. (§ ¶ $25 ea.) Practically a white Sir Watkin. A strong sturdy grower: large broad pure white petals and a large bold straight cup of pale citron passing to white. The brim of the cup is prettily frilled. First-class certificate, R. H. S.

NARCISSUS MONTANUS

Narcissus montanus, (C. ¶ * $2.50 doz.) also known as *poculiformis* and popularly as

the "drooping silver star" narcissus, known to cultivators for more than 200 years, is a wild hybrid, said to be a native of damp Pyrenean valleys, and forms another monotypic section. Its parentage is supposed to be *N. moschatus* crossed either with *N. poeticus* or *N. dubius* (a Tazetta variety). The drooping "swan's neck" character of moschatus distinguishes it from the Leedsii. The flower has a star-shaped perianth of pure white and a white cup. The flowers, while not large, about two and one-half inches from tip to tip of perianth petals, are of distinctive form when well grown and very interesting. They are frequently borne two to a stem. Rather difficult to grow.

NARCISSUS MACLEAII

A distinct type also known as Diomedes minor and Panza bicolor. (D. 4 in. § ¶ $1.50 doz.) A very pretty and distinct dwarf-growing, small-flowering type aptly described as a "baby bi-colour." It is an old-time hybrid of unknown origin, received from France in 1819. The flower is composed of milk-white imbricated petals about three-fourths of an inch long, and a bright golden yellow

goblet-shaped crown half an inch long. Though small in all its parts it is a healthy, vigorous plant, flowering freely, and equally valuable whether grown in pots, beds, or naturalised.

NARCISSUS BARRII

A connecting link between the longer incomparabilis group and the smaller crowned poeticus and Burbidgei types. They are garden hybrids of various forms but all have a yellow and usually orange or reddish rimmed, wide-mouthed crown, the depth of which is one-fourth to one-third the length of the spreading star-like petals.

Barrii forms are produced by crossing *N. poeticus* with an Ajax variety, though a *N. poeticus* and a *N. incomparabilis* cross will produce flowers of both Barrii and Burbidgei forms.

The flowers of the Barriis while usually smaller than those of incomparabilis varieties are of refined and beautiful form and are usually carried "nose-up."

Well suited for pot culture—three to five bulbs in a pot—while for beds, borders, natur-

alising, and as cut flowers, they are highly prized.

ALBATROSS. (D. 18 in. § ¶ $2 ea.) A late large, spreading eucharis-like flower with white petals and a prettily frilled pale citron yellow cup conspicuously edged with orange-red. First-class certificate, R. H. S.

BULLFINCH. (D. $1.50 ea.) New. Broad, creamy white petals and a pretty crenulate-formed yellow cup deeply rimmed reddish orange.

CECILY HILL. (D. 19 in. 75c ea.) Late flowering, and very beautiful. Stiff white perianth, flushed cream-yellow at the base; cup yellow, shaded orange and edged cinnabar-red.

CONSPICUUS. (D. 20 in. § ¶ * 50c doz.) This "queen of the chalice cups" is a general favorite and one of the best of the section. A strong robust grower and very free, late bloomer. The flowers are large, of refined and beautiful form and splendid substance, lasting in water longer than almost any other narcissus. Broad soft yellow petals; short wide-mouthed cup of yellow with a distinct rim of orange-scarlet. First-class certificate, R. H. S.

CROWN PRINCE. (C. 20 in. § ¶ * $2 doz.) Sturdy grower, with a large handsome flower. Petals white, large yellow cup, heavily stained orange-red.

CUPID. (E. 18 in. $2.50 doz.) Very late—the last of the Barriis to flower and valuable for succession. Perianth white; cup yellow, flushed apricot. Very sweetly scented.

DOROTHY E. WEMYSS. (E. 22 in. § ¶ $5 doz.) By some considered the best of the Barrii section. A strong-growing late-blooming variety. Petals pure white, long and wide; Cup canary-yellow, conspicuously edged with orange-red. Award of merit, R. H. S., and Floral certificate, Daffodil Conference.

DR. FELL. (A. § ¶ $1.50 doz.) Extra early flowering and better adapted for pot culture and forcing than for open-air culture in cold climates as the buds often get

frosted and fail to expand perfectly, though in mild climates it does well. Petals sulphur white, cup soft yellow with a pronounced reddish tinge.

FLORA WILSON. (D. 20 in. § ¶ * $1 doz.) A very telling flower. Perianth pure white. Cup canary deeply rimmed orange-red.

GENERAL MURRAY. († $1.50 hu.) Perianth creamy-white; cup canary, shaded orange. Very free flowering and useful for masses and naturalising in grass.

GLITTER. (D. $1 ea.) A beautiful new seedling; flower of fine substance, rich yellow petals broad and well rounded. Crown deeply edged with orange-red.

GOLDEN GEM. (E. 15 in. ¶ $4 hu.) Very late, free blooming, prized for succession. Small but showy flowers with rich yellow petals and yellow cup edged orange.

GOLDEN MARY. (D. ¶ $2.50 hu.) Dwarf and late. Primrose-yellow perianth with golden cup.

LADY GODIVA. *Syn*: *Barbara Holmes.* (D. 20 in. § ¶ * $2 doz.) Sport from Barii conspicuus and having white petals instead of yellow. Award of merit, R. H. S.

MAURICE VILMORIN. (C. 13 in. § ¶ * $1.50 doz.) Beautiful flowers with broad creamy white petals and a rather long lemon-yellow cup stained orange-red at the brim.

MIRIAM BARTON. (C. 15 in. ¶ * 30c doz.) Popular for cutting purposes, beautiful flowers of a distinct delicate shade of soft primrose-yellow throughout.

MRS. C. BOWLEY. (D. 20 in. § ¶ * $1.25 doz.) A very good flower, white petals and striking orange-red cup. Floral certificate, Daffodil Conference.

MRS. R. C. NOTCUTT. (D. 15 in. § ¶ * $6 ea.) New and extra good. Long, broad, snow-white petals; cup buff and orange, prettily crinkled.

OCCIDENT. (14 in. $35 ea.) A new Barrii with flowers of perfect form, flat perianth petals of anary-cyellow; crown fiery orange clear to the base. Award of Merit, R. H. S.

NARCISSUS LEEDSII VARIETIES

Beatrice, star-petalled, with very short crown; and Duchess of Westminster, with larger crown and broader petals. Two flowers of the large trumpet daffodil Grace Darling are added for comparison. The Leedsii varieties are white forms of the incomparabilis and Barrii sections; i. e., white, with sulphur cups

N. NELSONI, VAR. MRS. BACKHOUSE

N. BACKHOUSEI, VAR. WOLLEY DODD

The Nelsoni section (Nelson's goblet cup or shortened bicolours) are hybrids between the large bicolour trumpets and *N. poeticus*. All have white petals and goblet-shaped crowns more than one-half the length of the petals. The Backhousei section are hybrids of a large trumpet yellow and a variety of *N. incomparabilis*, itself a hybrid of a yellow trumpet and *N. poeticus*. The perianth in the Backhousei varieties is sulphur yellow; in Nelsoni varieties it is white

ORPHEE. *Syn: conspicuus minor.* (B. 18 in. § ¶ * 30c doz.) Useful as an early cut flower. Perianth canary-yellow; cup yellow, heavily edged reddish orange.

SEA GULL. (B. 21 in. § ¶ * $1.50 ea.) Large spreading pure white petals and a canary cup edged apricot. Very beautiful. Early.

SENSATION. (D. 20 in. § ¶ $3 doz.) Late flowering, large pure white petals and canary-yellow cup, heavily rimmed with orange scarlet. A beautiful cut flower but should be taken when the bud is half open and allowed to develop with the stem in water. In this way the brilliant colouring is preserved.

SIDDINGTON. (D. 18 in. * ¶ $2 doz.) A remarkably free-blooming late variety, generally producing two flowers on a stem; petals yellow; cup yellow, open, broadly margined orange-red.

NARCISSUS BERNARDI

Wild Pyrenean hybrids, found wherever the wild poeticus and *N. abscissus* or *N. variformis* are growing together. The flowers have spreading white petals twice as long as the yellow cup and vary much in form but selections from the wild are offered under the names and descriptions following.

BERNARDI. (type) (D. ¶ * $1 doz.) Late flowering. Perianth white. Cup varies in size and colour from yellow to orange and sometimes stained scarlet.

FIRE GLOW. (¶ 12 in. $2 ea.) Perianth snowy white, cup glowing crimson the colour lasting well in the sun.

H. E. BUXTON. (D. 15 in. ¶ * 75c ea.) A specially meritorious collected form with white petals and a brilliant orange-scarlet cup. Very beautiful and remarkably free blooming.

CHAPTER XIII

The Pheasant's Eye and Poet's Hybrid Narcissus

The poet's narcissus with its white petals and red-rimmed shallow cup is familiar to all of us. It has been very freely used by hybridisers, and its influence is apparent in many of the medium-crowned sections discussed in the preceding chapter. It has lately also become one parent of the interesting and very promising new poetaz hybrids, referred to in the following chapter.

On account of their close resemblance in form of cup (which is but very little deeper), the varieties forming the Burbidgei and Englehearti sections are grouped together with poeticus.

NARCISSUS POETICUS

The poet's or pheasant's eye narcissus is a native of Southern Europe, and especially the Mediterranean region. It is distinguished by

white petals surrounding a small flattened saucer-shaped cup not more than one-quarter the length of the petal, and edged more or less conspicuously with carmine. All varieties and hybrids of *N. poeticus* are especially suitable for naturalising and for growing in garden borders; but for pot culture and winter forcing the earlier flowering varieties only are suitable and even they must be grown cool. Heat causes the flowers to "go blind," i. e. the sheath does not burst open.

ALMIRA. *Syn: King Edward VII.* (C. 15 in. § ¶ * $1.50 doz.) A new and beautiful large flowered poeticus with broad rounded snowy white petals of good substance. The cup of canary-yellow is broadly rimmed with deep red. Of taller growth, equally as early as, and even better for forcing than ornatus.

ANGUSTIFOLIUS. *Syn: radiflorus.* (C. † $1 hu.) An early flowering form selected from among the wild Pyrenean types, with narrow white perianth petals and orange-margined cup. Can be forced into bloom ten days before ornatus. It does finely naturalised.

CASSANDRA. (D. 17 in. $1 ea.) A new, very large flowering variety; tall, vigorous grower; flowers of good substance. Petals broad, wide-spreading, of clear white; cup yellow deeply rimmed with dark red. Award of Merit, R. H. S.

CHAUCER. (D. * $1 ea.) New, early. Well rounded large flat white petals, cup edged with bright scarlet.

DANTE. (19 in. $1.50 ea.) A new and beautiful large flowered poeticus with broad-petalled perianth of pure

white; cup citron-yellow edged with purplish red. First-class certificate, R. H. S.

EPIC. (E. $2 ea.) New, large, and solid flower, broad petals of white; cup flat, deeply edged with blood-crimson; fragrant.

GLORY. (D. 16 in. § ¶ $2 ea.) A new variety, having enormous flowers; the largest in the poeticus section, superior even to poeticus grandiflorus in size, shape, form, and colour. Petals pure white; cup yellow-edged with red. First-class certificate, Manchester.

GRANDIFLORUS. (E. 19 in. § ¶ $2 doz.) The giant poet's narcissus. Large flowering vigorous variety twice as large as ornatus. Petals pure white; cup very broad, yellow suffused with crimson.

HOMER. (D. § ¶ * $2 ea.) New, large with broad petalled flower similar to Poetarum. First-class certificate.

MARVEL. (F. 15 in. † $1.25 doz.) Late flowering. Has a small, distended bladder-like spath. Petals, pure white; cup yellowish, margined with saffron.

ORNATUS. (D. 13 in. § ¶ * $2 hu.) Early free-flowering, robust-growing variety with large handsome round white petalled flowers and yellow cups brimmed with red. Blooms three to four weeks earlier than the common poeticus, is good for massing in borders, naturalising in grass and for cutting. It forces easily if grown cool.

POETARUM. (E. 14 in. ¶ * $2.50 hu.) Distinct large-flowering old favourite sort with broad "paper white" petals; cup large orange-scarlet.

PRAECOX. *Syns: praecox grandiflorus, grandis-praecox.* (C. 18 in. § ¶ * 50c doz.) Earliest flowering of the poeticus group; ten days earlier than ornatus and can be forced into bloom by Christmas if desired; blooms out-of-doors in April. Flowers large; petals pure white; cup yellow edged with crimson. It is a free seed bearer.

PYRENEAN POETICUS. (D. & E. 18 in. ¶ * $2.50 hu.) Collected forms or their progeny varying much in shape,

N. LEEDSII, VAR. PRINCESS MAUD

N. BURBIDGEI, VAR. PRINCESS LOUISE

Two of the smaller-cupped intermediate hybrids. *N. Leedsii*, "silver-winged star daffodils" are hybrids of a white large trumpet and *N. poeticus*, and are therefore white-petalled, sulphur-cupped forms of *N. Barrii* and *N. incomparabilis*. In *N. Leedsii*, the cup is about one-half the length of the petals. *N. Burbidgei*, "dolly cup daffodils," are hybrids of *N. incomparabilis* and *N. poeticus*; the cup is only one-fourth the length of the petals

Orange Phœnix (Double). Intermixed petals of light and dark yellow. One of the easiest doubles to grow in any situation An old-time favorite

Gloria Mundi (Single). One of the very best of the medium-crown or cup section. Flower larger than the average. The crown has a rich red brim; petals yellow

SINGLE AND DOUBLE NARCISSUS INCOMPARABILIS

size and time of flowering. Especially adapted for naturalising; some very beautiful sorts may be selected from among them.

RECURVIS. (F. 15 in. * ¶ $1.50 hu.) The common, or "Pheasant's Eye" poeticus, popular in gardens and naturalised. Flowers late in May and will not force. Petals pure white; cup saffron yellow margined with deep orange-red, very sweet-scented.

THE BRIDE. (E. $10 ea.) New. Flower of much substance. Petals, broad, snowy white; cup, brilliant red.

TWIN FLOWER. (D. 16 in. ¶ * $1.50 doz.) Seedling, invariably bearing two pretty typical poeticus flowers on one stem.

VERBANENSIS. (F. 8 in. $1 doz.) Dwarf-growing type from the Lago Maggiore; flowers late.

NARCISSUS BIFLORUS

Properly known as the "Twin-flowered poeticus" and in olden times as "Parkinson's Primrose Peerless daffodil." The type is usually considered to be a natural hybrid between *N. Tazetta* and *N. poeticus,* as it is often found wild where the two species grow in close proximity in France, Italy, and through the Tyrol to Switzerland. It has been aptly called "the extreme northern form of Tazetta as it approaches poeticus." The flowers, while of poeticus formation and colouring, minus the red brimmed cup, are borne Tazetta-like in clusters of two or three

—though seldom more than two on one stem. The exceptionally sweet perfume of *N. biflorus* suggests Tazetta influence, though as Parkinson says, the fragrance is less "stuffing." The forms vary and though selections have been made under cultivation none have, we believe, been accepted as sufficiently distinct to be called true botanical varieties. There is some difference horticulturally, however, between the following:

BIFLORUS. (E. 15 in. ¶ * $1 hu.) The type. Petals, cream-white or sometimes light primrose coloured; cup, yellow. Good for naturalising and as a cut flower.

BIFLORUS HYBRIDUS. (E. 18 in. ¶ * $2 doz.) A selection from collected bulbs, truss many flowered; the flowers larger than the type.

NARCISSUS BURBIDGEI

Small-cupped hybrids between incomparabilis and poeticus, selected from other sections and having a close resemblance to *N. poeticus*. The cup in these Burbidgei forms is about one fourth the length of the petals, a trifle longer than but not quite so flat as in *N. poeticus*. Other distinguishing features of Burbidgei are the greater range of

colouring in the petals, which run into yellow, and an earlier flowering season.

The varieties of this section are healthy, vigorous growing and produce beautiful flowers. They are well suited for either pot culture, beds, borders or naturalising. The flowers are particularly attractive when cut but should be cut when the the buds are but half expanded, for like all red or ruddy rimmed narcissus, the vivid colouring fades with age or when long exposed to strong sun. The best flowers are produced on good, fairly strong, moist loam.

AGNES BARR. (C. 16 in. ¶ * $2.50 hu.) An exquisite flower; petals, creamy white; cup, yellow.

BURBIDGEI. (C. 13 in. § ¶ * $1.50 hu.) The type. Early flowering. Petals, clear white; cup, light yellow, rimmed with reddish-orange.

BARONESS HEATH. (C. 18 in. ¶ * $2.50 hu.) Very distinct. Flowers drooping; petals, yellow: cup, yellow tinged with orange deepening to red at the brim. Foliage, deep blue-green.

BEACON. (C. $5 ea.) Beautiful new variety. Petals, circular shaped, cream-white; cup, fiery-red. First-class certificate, R. H. S.

BEATRICE HASELTINE. (E. 15 in. $2 doz.) Beautiful late bloomer. Petals, creamy-white; cup, flat, canary coloured, edged with orange-scarlet.

BERNICE. (C. 8 in. $2 ea.) Petals, pointed, creamy-white; cup, funnel-shaped, deep blood-red to the base.

Narrow, grass-like foliage. Thrives best in a sheltered situation which faces north.

BLOOD ORANGE. (§ ¶ $2 ea.) New and very showy. Petals, broad, cream colored; cup, brilliant orange-red.

CHERRY RIPE. (D. 13 in. $2 ea.) A new and attractive variety. Petals, snowy white; cup, vivid orange-scarlet, broadly edged with bright red.

CROWN PRINCESS. (C. 15 in. ¶ * $5 doz.) Very beautiful form. Petals, sulphury-yellow shading to pure white; cup, canary, edged rich orange.

ELLEN BARR. (C. 18 in. § ¶ * 50c doz.) Petals, broad, snow-white; cup, citron, stained orange-scarlet. Very effective when grown in masses.

FALSTAFF. (C. 16 in. § ¶ * $2.50 hu.) Petals, pure white; cup, lemon coloured with orange rim. Flowers of splendid form, excellent for cutting, and when massed the snowy-white effect is very beautiful.

FIREBRAND. (C. 17 in. ¶ * $2 ea.) New variety, remarkable for the brilliant colouring of the prettily fluted cup, which is an intense fiery-red. Petals, cream-white shading to lemon at the base.

FRAILTY. (C.14 in. ¶ * $2.50 ea.) Charmingly quaint, pendent flower with gracefully twisted, snow-white petals; cup, large, open, yellow, edged with bright-red.

HAROLD HODGE. (C. 18 in. § ¶ * $1 ea.) New. Petals, white; cup, small, yellow edged, red.

HYACINTH. ($1.50 ea.) Petals, snowy-white; cup, spreading, lemon-yellow.

JOHN BAIN. (B. 15 in. § ¶ * 50c doz.) An old, reliable, favourite. The flower is large and of good substance. Petals white; cup, small, citron-yellow. It blooms early and freely; forces easily; is a good cut flower, whether grown under glass or out of doors; very effective for massing in beds, borders and naturalising.

LADY ISABEL. ($2 ea.) Stiff, erect habit, with highly colored flower. Petals, reflexed, creamy-white; cup, saucer

shaped, light yellow, deeply edged and shaded with intense scarlet.

LITTLE DIRK. (D. 17 in., 50c. doz.) A small-flowered variety. Petals, neat, cowslip yellow; cup, bright orange-red.

LITTLE DORRIT. (C. 21 in. § ¶ * $2 ea.) New A small flower. Petals, white; cup, small, flat orange-red.

MERCEDES. (D. ¶ * $1.50 ea.) A drooping flower with twisted snow-white petals; cup, spreading, yellow edged, bright red.

MRS. KRELAGE. (E. 75c. doz.) A very late blooming variety (May). Petals, reflexed, white; cup, broad, flat, serrated, citron-yellow flushed with orange.

ORIFLAMME. (§ ¶ $4 ea.) Showy, new variety. Petals, creamy-white; cup, fiery-scarlet. Award of Merit, R. H. S. and at Birmingham.

OVID. (C. $1.50 doz.) Petals, opening, yellow fading to white; cup, saucer shaped, three-fourths of an inch across, beautifully crimped, rich yellow, heavily stained with orange.

PRINCESS LOUISE. A beautiful flower with large white perianth and widely expanded cup of rich orange, passing off apricot.

PROMETHEUS. ($6 ea.) The flowers, sometimes borne in pairs. Petals, rich, satiny-yellow, paling with age; cup, saucer-shaped, crimped, rich scarlet almost one inch across; foliage, broad and massive.

ROSALIND. (E. 13 in. § ¶ * $2 ea.) A new and handsome, late variety with pendent flowers. Petals, pure white, broad and inclined to reflex; cup, bright yellow, deeply rimmed with fiery-scarlet. A strong grower.

SCARLET EYE. ($5 ea.) A fine new Burbidgei. Petals pure white and of good substance; cup of vivid orange-scarlet.

SCARLETTA. ($10 ea.) A showy, new seedling with cream-colored perianth, and a fluted cup of glowing scarlet.

SCEPTRE. (D. 14 in. § ¶ $10 ea.) New and beautiful variety. Petals, cream-yellow; cup, prettily fluted and of bright reddish orange.

ST. JOHN'S BEAUTY. (C. 20 in. ¶ * $1.50 doz.) A large, loose but showy, flower; petals, chanelled, sulphur-white; cup, beautifully frilled, yellow, edged with orange-red.

THE PET. (E. 14 in. $1.50 doz.) A dwarf, erect grower with a prim little flower of perfect form. Petals, firm and almost pure white; cup, citron-yellow with a protruding pistil.

VANESSA. (C. 16 in. ¶ * $2.50 hu.) Small, compact, symmetrical and attractive flowers. Petals, pale-yellow; cup, small, flatly expanded, orange tinged reddish. Very fragrant. Sometimes called "yellow poeticus."

VIVID. (D. 15 in. $6 ea.) New and very showy flower. Petals ivory-white; cup, large, saucer-shaped, fiery orange-red, the colour holding well. A strong, free grower.

NARCISSUS ENGLEHEARTII

Hybrids, in which the poeticus influence predominates; practically Burbidgei forms with more fluted flat cups that may be likened to ruffled discs. Some of the varieties indeed have been plucked from among the Burbidgeis; others are direct crosses by Rev. G. Engleheart.

ASTRADENTE. ($25 ea.) A new, large and beautiful flower, with a white perianth and a very large flat crown of reddish-orange edged with bright red. Award of Merit, R. H. S.

Trumpet daffodils, showing the range of size: Glory of Leiden, one of the largest; and Johnstoni Queen of Spain, one of the smallest. In the centre the giant jonquil (*N. odorus*, var. *rugulosus*)

The Campernelle jonquil (*N. odorus*), a hybrid of *N. Jonquilla* and a trumpet daffodil. Note the flaring cup and star-like perianth. Compare with the illustration of the true Jonquil on Plate XXVIII

BIG AND LITTLE DAFFODILS

The new poetaz type of saucer narcissus is a blending of the tender *N. Tazetta* and the fragrant poet's narcissus. Elvira, one of the best varieties

The poet's narcissus (*N. poeticus*). Very fragrant; late flowering. There are several varieties of generally similar appearance; ornatus is the most reliable for forcing

NARCISSUS POETICUS AND THE NEW HARDY, CLUSTER-FLOWERED N. POETAZ

CRESSET. (C. 15 in. $12 ea.) New flower of perfect form with large, broad, round, white petals, and a flat golden cup heavily edged with vivid scarlet.

CONCORD. (15 in. $25 ea.) A grand new variety of perfect form, with broad, rounded perianth petals of deep canary-yellow; crown, large, widely expanded at the mouth, and of a deep golden-yellow, heavily edged with fiery orange-red.

EGRET. (D. § ¶ $25 ea.) Finely formed, broad petals of pure white, and a very large, flattened, fluted cup over one inch in diameter of lemon-yellow, shaded and margined with gold. Award of Merit, Birmingham.

GOLD EYE. (§ ¶ $3 ea.) New and very excellent variety. Petals, pure white, and large disk-like crown prettily fluted and margined with orange-red. Award of Merit, Birmingham.

INCOGNITO. (C. § ¶ 16 in. $30 ea.) A new, large and very durable flower, with flat, white petals and flattened, frilled crown of bright yellow, margined with apricot-orange.

ROYAL STAR. ($10 ea.) A magnificent new Engleheartii, with large, showy, lasting flowers, four and a half inches across. Perianth, creamy-yellow maturing white; crown, large, flat and fluted orange-yellow changing to fiery orange-red. A tall, robust grower.

POLESTAR. (D. § ¶ $3 ea.) New and large, late-flowering variety. Petals white, four inches across; cup, large, flat and prettily fluted; canary-yellow.

SEQUIN. (D. 12 in. § ¶ * $3 doz.) A very distinct and beautiful new seedling, with snowy-white petals and a very large golden cup, flattened against the petals.

THISBE. (18 in. § ¶ * $1.50 ea.) A very beautiful flower with slightly reflexed, white petals; cup large, spreading, flattened against the petals; canary-yellow margined with orange-red.

CHAPTER XIV

The Sweet Scented Jonquils and Campernelles

Regarded from a garden standpoint, the jonquils form a characteristic group. They are all cluster-flowered, deep yellow colour, most deliciously scented and of a slender growth with round, rush-like foliage. In some of the hybrid forms that are included in this present grouping the flowers may be borne as few as two on a stem. They show a remarkable range of variation.

Narcissus Jonquilla. (E. 14 in. § ¶ $2 hu.) The true, sweet-scented, single jonquil. A species indigenous to sections in Southern Europe, varying in habit according to environment, and in consequence several typical selections from the wild are known as *N. Jonquilla,* var. *minor, stellario,* etc. But as "collected bulbs" are, I believe, no longer marketed, and as the bulb growers' "types" are fairly well selected, I will go no further into their delicate distinctions. The single jonquil is well known and highly prized as a cut flower for growing in pots, and it does well out of doors if planted in a protected, warm, sunny situation, in well-drained or raised beds of rich soil. It blooms late in the season. The deliciously fragrant, rich yellow

small flowers are usually borne in pairs though sometimes in clusters of as many as six. There is a double form also.

N. JUNCIFOLIUS. *The Baby Jonquil.* (D. 4 in. § ¶ $2.50 hu.) Very much like the preceding but smaller; indeed it is the smallest narcissus known, with little buttercup-like flowers, only three-fourths of an inch across from tip to tip of the spreading petals. The cup is usually widely expanded and often perfectly flat. Colour, rich yellow. Delicately perfumed. It does best when grown in pots or the cold-fame. Though it thrives in gritty soil, in well-drained pockets in rock work or similar situations, it also makes an excellent edging plant when in favourable locations.

N. ODORUS. *Campernelle Jonquil.* A rush-leaved, cluster-flowered group of narcissus, more robust in growth and bearing larger flowers than *N. Jonquilla,* with wider petals and more upright crown, and generally known as the "giant jonquil." There are several good forms offered under different varietal names, the most important of which are described as below. All are suited for pot culture—six bulbs to a five-inch pot—borders and naturalising.

N. ODORUS INTERJECTUS. (B. 18 in. § ¶ * $2 hu.) This is the type known as "Campernelle Jonquil," and though found wild in some parts of southern Europe, is now considered to be one of nature's hybrids. Probably, a cross between *N. Jonquilla* and *N. Pseudo-Narcissus.* It is early in blooming, producing two or more full, yellow, fragrant flowers on each stem.

N. ODORUS RUGULOSUS. *Campernelle major.* (B. 18 in. tinct form of dwarfer growth than the type, a little later and with a longer, narrower cap of darker yellow; delightfully fragrant, rich yellow flowers. It thrives best in shade, or in grass on a slope ground facing north.

N. ODORUS RUGULOSUS. *Campernelle major.* (B. 18 in. § ¶ * $2 hu.) More robust and larger flowered than the other forms, and known as the "Improved Campernelle,"

"Giant Jonquil," etc. Fragrant, rich yellow flowers, often three to a stem, with broader, stouter petals, and a straight, wrinkled cup.

N. ODORUS RUGULOSUS MAXIMUS. ($100 ea.) A new large flowering form. The flower is twice as large as in rugulosus, and of handsome shape with dark golden petals, which are remarkably broad; prominent, straight, chanelled cup, very fragrant. First-class certificate, Birmingham.

N. ODORUS CALATHINA. ($1.50 doz.) The "many-flowered Campernelle," bearing three to five yellow, sweet-scented flowers to a stem.

N. GRACILIS. *Syn: Helene.* (E. 14 in. ¶ * 50c doz.) An old and presumably wild hybrid between *N. Jonquilla* (*or N. juncifolius*) and a *N. Tazetta* variety. Rush-leaved and bearing clusters of three to five flowers on a stem. The deliciously fragrant flowers open rich yellow, but as they age change to pale sulphur. It is the latest of the rush-leaved varieties to bloom, and is not only prized for keeping up the succession, but it is a very graceful garden plant and also does well in pots.

N. GRACILIS TENUIOR. *The silver jonquil.* (D. 9 in. $1 doz.) Smaller flowers, more slender in growth and of paler colour than the preceding. A choice dwarf type, with sweet-scented flowers; the petals being silvery-white, and the cup yellow. It bears several flowers on a stem; late flowering.

N. TRIDYMUS, VAR. CLOTH OF GOLD

The long crown, hardy, yellow, cluster-flowered narcissus. *N. tridymus* are hybrids between a trumpet daffodil and *N. Tazetta*. The flowers resemble those of a small Nelsoni variety, but are borne in clusters

CAMPERNELLE OR JONQUIL

Jonquils and campernelles, while not so showy as the large-flowered daffodils are popular because of their intense yellow colour and delightful fragrance. They are much confused—the true Jonquil (*N. Jonquilla*) shown on the left, has a short, shallow crown and imbricated petals, thus differing from the Campernelle (*N. odorus*), Plate XXV, which has star-like petals and a larger, flaring crown. The photograph on the right shows the giant (or slightly wrinkled) jonquil (*N. odorus*, var. *rugulosus*)

CHAPTER XV

The Tender Cluster-Flowered Narcissus

The polyanthus narcissus (*N. Tazetta*) and its many varieties form a large family of closely resembling types, popularly called "sweet-scented cluster-flowered narcissus," the flowers being borne in many flowered clusters.

The history of this ancient race extends to the misty eras of legend and mythology. At the present time descendents of the varied types are found growing wild over a wide area neighboring the Mediterranean from Spain to Asia Minor, and some few even as far east as India, China, and Japan, and westward others have become naturalised and typified in the Canary and Scilly Isles, and even in Bermuda.

Being natives of a mild climate, the Tazettas cannot withstand the rigours of cold latitudes and are not to be depended upon as garden plants north of the freezing belt. The

Hollanders have produced numerous beautiful hybrids, some of which are hardier than the typical southern forms and I have successfully grown and flowered many of the Dutch varieties in my garden in the vicinity of New York City. Yet, like tea roses, while they may live through two or three winters, with careful protection, they eventually get killed by frost. They require the winter protection of a cold-frame. In lieu of hardiness the polyanthus narcissus compensates its grower in northern climes by its accommodating adaptability to being grown in the house, in pots, pans, or flats, and some of them even in bowls of water and gravel without soil. Under such artificial culture they grow with luxuriance and flower freely during the winter and early spring months.

In our southern states and in all favoured locations where the bulbs do not freeze, they flourish and increase. A cream-coloured variety that has escaped from cultivation in the Bermudas is known locally as "Bermuda Jonquil," the thriftiness of which, I think is due not so much to rich soil as to deep sub-soil of notable porosity, it being a disintegrated

coral rock through which surplus water rapidly drains away. If we who garden in the north over water-holding clay sub-soil would make it less retentive, greater success would crown our efforts in growing not only narcissus and daffodils, but all other garden plants.

ALL YELLOW VARIETIES

ADONIA. (C. $1.50 doz.) A medium, early variety. Large, well-formed flowers; canary-yellow with deep orange cup.

BATHURST. (D. $1 doz.) A distinct and beautiful dwarf, compact-growing, late variety, bearing very large flowers of clear, light yellow with dark-orange cups.

CHARLES DICKENS. (D. $1 doz.) Large flowers, primrose-yellow, with orange cup. Late.

GRAND PRIMO CITRONIERE. *Syn: "Yellow Primo."* (60c doz.) A selection from the bi-coloured Grand Primo—so popular for cutting. This yellow form bears the same large trusses of handsome, clear, light yellow flowers with dark citron-coloured cups.

GRAND SOLEIL D'OR. (A. $1 doz.) A distinct, very early variety, producing large clusters of rich yellow flowers having deep-orange—almost red-orange—cups. It is one of the best of this colour for early forcing and very popular with the Scilly Islanders, who grow it extensively for cut flowers for market.

JAUNE SUPREME. (C. $1.50 doz.) Medium early, bearing fine trusses of large, clear yellow flowers with deeper yellow, or orange, cups. A vigorous grower, and does particularly well when grown in pots.

LORD CANNING. ($1 doz.) Profuse bloomer; rich yellow, with orange cup.

QUEEN OF YELLOWS. ($2 doz.) A new and good variety, bearing immense clusters of large flowers, rich yellow with golden cup.

SIR ISAAC NEWTON. *Syn: Newton.* (C. $1 doz.) A very free, medium early; pure yellow, with orange cups.

Additional varieties of yellow petalled polyanthus narcissus catalogued in Europe, but with which I have had no experience, are:

Adelphi.
Apollo.
Aurea Floribunda.
Daybreak.
Don Carlos.
Fleur Parfaite.
Formosa.
Franklin.
Gen'l Gordon.
Gladstone.
Golden Era.
Goldfinch.
Heroine.
Illustre Soliel.
Imperator.
Isabella.
La Belle Comtesse.
La Plus Belle Jaune.
Masterpiece.
Mercurius.
Phyllis.
Prince of Wales.
Soleil Brilliant.
Surprise.
Wilhelm III.

BI-COLOUR VARIETIES

BAZELMAN MAJOR. *Syn: Trewianus Major.* (B. $2 doz.) A magnificent early flowering variety, of robust growth bearing three to six trusses of extra large, round flowers. Pure white petals and rich orange-yellow cups. It is one of the best varieties of polyanthus narcissus in cultivation. It does well in pots and forces splendidly.

CHINESE SACRED. *Syn: Jos flower, Grand Emperor of China, Good luck flower, etc.* ($1.25 doz.) This Chinese narcissus, a typified form of the Tazetta, is of world-wide popularity, being prized for its marvellously rapid

growth and its abundant silvery-white, yellow-cupped flowers, which are produced in from forty to sixty days after planting. It is usually grown in bowls of water. They grow and flower in the sunny window of any living room, doing their best in a temperature not exceeding sixty degrees. The moist atmosphere of a kitchen or laundry suits them perfectly. Then their flowers never "blast" or dry up in bud form.

CONSTANTINOPLE. *Syn: Double Roman.* (B. $2 hu.) Very early and free flowering. Extensively forced by florists for winter cut flowers. Also does well in pots. The petals are white; the yellow cup usually comes semi-double or double.

GLORIOSUS. *Syn: Gloriosa superba.* (A. 75c doz.) An excellent early, free-flowering sort, producing large trusses of pure white petalled flowers, enlivened with orange-scarlet cups. It is one of the best of this colour for early forcing.

GRAND MONARQUE. (D. 75c. doz.) Splendid trusses of white flowers, with lemon-yellow cups. A vigorous grower, doing well in pots, and also may be flowered in bowls of water.

GRAND PRIMO. (75c doz.) Masses of large white flowers having citron yellow cups. Extensively grown for cut flowers.

GROOT VOORST. (60c doz.) A popular old variety, bearing large white flowers with light yellow cups.

HER MAJESTY. (D. $1.50 doz.) One of the largest flowering and best varieties in this section. The broad round petals are pure white, the cups deep golden yellow.

MAESTRO. (C. $2 doz.) A good dwarf, very free flowering sort, with extra large flowers. Petals white and dark orange cups which often come double or semi-double. There is no better polyanthus variety for pot culture.

MONT CENIS. (B. 75c doz.) Very early, and one of the freest flowering varieties, often producing four spikes

from one bulb, and the spikes sometimes carrying from eighteen to twenty-two flowers each. Petals pure white; cups rich yellow.

PRINCE METTERNICH. *Syn: Prinz von Metternich.* Good for cutting, having exceptionally long stems carrying broad white petalled flowers with rich golden yellow cups.

QUEEN OF THE NETHERLANDS. (A. $1.50 doz.) Extra early large flowering. Resembling Bazelman Major. Pure white with rich yellow cups.

STATES GENERAL. *Syn: Staten Generaal.* (B. 75c doz.) A well-known old early variety with creamy white petals and orange cups. A free seeder, crossing readily with some of the Ajax varieties.

Other varieties of the two coloured (white petalled, yellow cupped) polyanthus narcissus—offered by the trade—but not tested by the writer are:

Aurora
Bazelman Minor
Bouquet Parfaite
British Queen
Distinction
Duchess of Albany
Empress of India
Grand Sultana
Insulinde
La Belle Normandie
Lacticolor
La Jolie
La Noblesse
Laura
Louis le Grand
Luna
President Harrison
Prince of Narcissus
Princess of Wales
Queen of Narcissus
Queen Victoria
Sir Walter Scott
Volume Laurius

ALL WHITE POLYANTHUS

Varieties having white petals and white or cream-coloured cups:

PAPER WHITE. *Syn: Totus albus, dubius, papyraceus.* (A. $2 hu.) This and its improved form Grandiflora are

A POLYANTHUS NARCISSUS, N. TAZETTA

These cluster-flowered narcissus are not hardy except in the South and are excellent for forcing under glass. This variety, Bazelman major, is one of the best for cut flowers; white with deep orange crown

The double campernelle is a recent, welcome novelty. There are but few new double daffodils. Deep yellow, fragrant

Queen Anne's daffodil (*N. Capax*, var. *plenus*). The regularly imposed series of petals gives a unique, tile-like effect

TWO DAINTY DOUBLE FLOWERS

the most important and extensively forced of all varieties of polyanthus narcissus for cut flowers in winter. Snow-white star-like blossoms borne in good sized trusses on long strong stems. The bulbs are mostly grown in Southern France, whence they are exported by millions annually; of easy culture and vigorous growth, often being brought into bloom long before Christmas. May also be grown and flowered successfully in bowls of water with moss or pebbles.

PAPER WHITE GRANDIFLORA. *Syns: Paper White multiflora, Snowflake.* (A. $2.50 hu.) This improved type is rapidly supplanting the preceding from which it is a selection. It possesses all of the good qualities of its predecessor with the added merits of being more vigorous and producing larger trusses of larger individual flowers which are also of somewhat more durable substance.

SCILLY WHITE. (B. $2 hu.) Early, dwarf, sturdy growing. A most profuse flowered variety, grown by acres in the Scilly Isles. It forces easily. Flowers pure white, with creamy cups rather small, but borne in good-sized trusses.

WHITE PEARL. ($1 doz.) A distinct and excellent variety bearing medium-sized pure white flowers with almost white cups.

WHITE PERFECTION. (E. $1.50 doz.) Late flowering, bearing large trusses of large pure white petalled, cream cupped flowers. Growth dwarf, and sturdy.

THE "INTERMEDIATE" CLUSTER-FLOWERED NARCISSUS

These natural hybrids and their varieties —known as the intermediate and orientalis sections—so closely resemble in many re-

spects the polyanthus narcissus that it is taken for granted that some member of the *N. Tazetta* is one of the progenitors, but the opposite parent is merely conjectured.

Both the intermedius and orientalis types bear their flowers in bouquet-like clusters and are as sweetly fragrant as the Tazettas and imitate them in not being hardy enough to be always grown successfully in Northern gardens, though all thrive in temperate and southern climates and are amenable to pot culture and forcing into flower during the winter in greenhouse, frame or window.

INTERMEDIUS. *Syns: intermedius minor, tenuifolius minor.* (50c doz.) A supposed hybrid between *N. Tazetta* and *N. Jonquilla.* It bears clusters of several fragrant flowers; the perianth petals being soft yellow and the cups of deeper yellow. Its chief difference from the yellow flowered polyanthus being its semi-cylindrical or half rush-like leaves.

INTERMEDIUS MAJOR. (E. 13 in. § 50c doz.) A larger flowered selection from the preceding with clusters of sweet-scented flowers. Perianth primrose; cup yellow.

INTERMEDIUS BIFLORONS. *Syn: Etoil d' or.* (50c doz.) A pretty garden form with narrower petals of bright yellow and a longer cup of golden yellow: a dwarf grower. Practically a small-flowered polyanthus (Tazetta).

INTERMEDIUS SUNSET. (E. 16 in. § $3 doz.) A selection or variety of bifrons with an orange-scarlet brimmed cup, the perianth being canary-yellow. It bears four to five flowers on a stem and is very showy.

ORIENTALIS. *Syn: Schizanthus Orientalis, and Orientalis of Haworth.* (D. 12 in. 50c doz.) The yellow Orientalis, a supposed hybrid between varieties of *N. Tazetta* and *N. incomparabilis.* The flowers are borne in clusters of three to four, petals spreading, light yellow; cup orange yellow. Flat foliage. Very fragrant.

MUSARET ORIENTALIS. (E. 12 in. 50c doz.) The white Orientalis, good sized, sweetly scented, poeticus-like flowers borne in clusters. Perianth snow white; cups yellow, stained orange. Excellent in temperate and warm climates for beds, borders, and pot culture. Though naturally late flowering it forces safely if done slowly.

CHAPTER XVI

The Hardy Cluster-Flowered Narcissus

It is only within the last few years that the beauty, fragrance and variety of the bouquet-like heads of flowers of the tender Tazettas have had a counterpart for our Northern gardens. This has become possible through the new hardy cluster-flowered hybrids, fully equalling and in some respects surpassing their more tender colleagues in size of flowers, beauty, colouring, and form. The new poetaz and tridymus varieties have proven as robust and ruggedly hardy as any wild Northern daffodil, and will become more popular when better known.

NARCISSUS POETAZ

This is a very well defined section produced by crossing *N. Tazetta* varieties with *N. poeticus ornatus* as the seed parent. The individual flowers of the poetaz hybrids resemble poeticus in form and size, are freely produced

in pairs and clusters on strong stems so that a bed or clump of the plants in bloom shows a dense mass of flower. The varieties force easily and are effective when grown in pots and pans. Their fragrance is not so oppressive in a confined atmosphere as that of the Tazettas. They were awarded a first prize at the Haarlem (Holland) Exhibition of 1900.

ALSACE. (C. $1.50 doz.) Broad pure white petals of true poeticus form: cup yellow, edged reddish while the blossom is young. It blooms three weeks earlier than *N. poeticus ornatus* and usually bears three flowers to a stem. Promises to be extra good for forcing.

ELVIRA. (D. $1 doz.) Long-stemmed large flowers of unusually good substance. Petals pure white; cup yellow. Extra free flowering, and three to four flowers on a stem; a very vigorous sturdy growing narcissus that multiplies rapidly, which accounts for its moderate price. Award of Merit, R. H. S.

IDEAL. ($2.50 doz.) White petals and a dark orange coloured cup. The clusters usually contain six to seven blossoms.

IRENE. ($2.50 doz.) Satiny sulphur-yellow petals and orange cup. A large broad truss containing eight to nine flowers.

JAUNE À MERVEILLE. (D. $3 doz.) The largest yellow flowered variety. Perianth yellow; cup deep golden colour, seven to eight flowers on a stem.

KLONDYKE. ($1.25 doz.) One of the deepest of the yellows. Perianth yellow; cup deep golden: six to seven flowers in a truss.

LOUISE. ($1.25 doz.) True poeticus formed flowers

borne in clusters of three and four on stems two feet long. Large pure white petals and yellow cup.

LUCIA. ($1.50 doz.) Tall stems carrying seven to eight flowers with yellow perianth and golden yellow cup.

PROFUSION. ($1 doz.) Of dwarf growth but free flowering, bearing six flowers in a truss. Perianth white, cup yellow.

SUNSET. ($1.50 doz.) Bears six large flowers on a stem. Perianth sulphur-yellow; cup orange.

TRIUMPH. ($2.50 doz.) Bears three to four large Bazelman Major like flowers on a stem. Perianth pure white, cup deep yellow.

NARCISSUS TRIDYMUS

Hardy cluster-flowered hybrids, the individual flowers resembling those of a small Nelsoni, with spreading perianth, and cup-shaped crowns. They are produced from various crosses, *N. Tazetta* always being one of the parents, the other being an Ajax or a Leedsii variety. The type bears two or three, some varieties four, and a few, five flowers in a cluster on a single stem. All are noted for their sweet fragrance.

A. RAWSON. (D. 14 in. $5 doz.) A very handsome variety with a full rich yellow cup, and bold clear yellow petals.

CLOTH OF GOLD. (D. 15 in. $2 ea.) One of the best of this section and the brightest coloured of all; rich orange yellow perianth and deep golden cup. A robust grower, free bloomer and bold flowers rich in perfume.

Miss White. (C. 21 in. 50c ea.) Each stem bears three or four beautiful silvery white "Leedsii" flowers.

Mrs. Alfred Pearson. (50c ea.) Four or five large pure white flowers with orange-yellow cups on each stem.

S. A. De Graaff. (C. 12 in. $1.50 doz.) One to three large bold flowers to a stem. Perianth primrose-yellow; cup rich yellow.

St. Patrick. (D. 50c ea.) Free flowering robust growing, with three large and remarkably striking flowers to a stem. Perianth campanulate, soft yellow; cup rich deep golden colour well flanged at the mouth. Very sweetly scented.

The Twins. (C. 15 in. $1.50 ea.) A pretty new variety bearing two flowers to a stem. Perianth creamy white; prominent rich yellow cup; violet scented: a robust grower.

CHAPTER XVII

Double Daffodils and Narcissus of all Groups

Double-flowered daffodils and narcissus are found in but few of the sections. The aggregate number of distinct commercial kinds in all classes does not amount to over twenty-five—and even some of these are mere selections—sent out under the introducers' names. The large trumpet section has five double varieties in the all-yellows, two in the bi-colour and one in the all white divisions. The medium-crown daffodils have ten double varieties, while in the solitary-flowered cup group *N. poeticus* supplies one double form only. Among the cluster-flowered the jonquils have two doubles and the Tazettas have the same number.

The origin of the double narcissus is unknown and I think I am correct in saying that no double narcissus has been produced by the art of man, at least, not in modern times. I

am inclined to think that most doubles are "sports" for double flowering plants are usually found here and there among their wild single types and sometimes the double-flowering plants when transferred to other soil or locations will revert to the single type.

There is much confusion of nomenclature among the doubles and in describing what I consider to be the only distinctive dependable commercial varieties I have given both popular and botanical names.

When the Daffodil Conference of 1884 authorised the florist's method of naming all hybrid narcissus (e. g. Princess Mary, Sir Watkin, etc.) they relieved narcissus lovers of much complexity, but unfortunately the Conference ruled that wild species, sub-species, or types—which includes the doubles—were to retain their botanical titles. The result has been that in various books and catalogues we find the same variety under several names, some being the undiscarded, ancient titles, others more modern or popular appellations. Perhaps some future daffodil conference will straighten out the nomenclature of fixed double varieties.

DOUBLE ALL YELLOW TRUMPET DAFFODILS

Double Van Sion. (B. 12 to 15 in. § ¶ * 50c doz.) This famous double yellow daffodil of old American gardens is also very popular in Europe under the name of "Wilmer's Double Golden Daffodil" and among the more botanical as *"N. telamonius plenus,"* it being the doubled form of a single yellow large trumpet called "Telamonius" in England and "Van Sion" in Holland.

It is not only the most important of all doubles, but probably the most important of all varieties, single or double. It is planted by the millions annually. It is generally a reliable producer of large handsome double golden-yellow flowers under varied cultural treatments, soils and climates whether grown in garden borders, naturalised, or "forced" in pots or "flats" for winter flower.

Like its parents Double Van Sion varies in size, form, and other characteristics accordingly as influenced by environment. Years ago when there was less demand for Double Van Sion, the growers of flowering bulbs propogated and dessiminated their own types of "pedigree" strains, and there was much rivalry among the growers as to the merits of their respective stocks, some having "rogued" to the unburst double trumpet type, others to the "rose double" form, i. e. trumpet burst, its petals curving backwards and intermingling with the perianth segments. Between these two extremes were several intermediate forms. But now no one grower seems to have a specialised type, all seem to depend upon small "collected" bulbs, most of which come from Asia Minor and Italy. These of course are very variable in type of flower. The bulb grower is supposed to plant and grow these collected bulbs for a year or two to "tone and fatten them up" and get the "green" out of the flowers. But every "rogue" (a bulb producing an undesirable style of flower) that is

pulled up and thrown away—means the loss of its cost—and people are not inclined to throw away money—we therefore do not get the percentage of ideal double unburst trumpets in our Double Van Sions—that we did a few years back.

It is almost amusing when you complain to a foreign bulb grower about his strain of "Double Van Sions" to hear his explanations diplomatically put, but in substance: If forced: "you gave them too much heat or too soon," if in the open: "your climate it is too hot and the sun too bright." They will never admit anything wrong in their strains, but insinuate that the grower has actually brought into being such types of flowers by cultural mismanagement. And yet I know of double trumpet daffodils in old gardens that have annually produced flowers with unburst trumpets for many years, regardless of the too sudden change from winter into summer.

Another vagary of the Double Van Sion is its tendency to produce flowers tinged with green and sometimes almost all green.

I do not know that any scientific explanation of the reason, nor a remedy, has ever been advanced. A few years ago I visited a Guernsey narcissus farmer who had removed his wares to Virginia—he had about two acres of Double Van Sion, the flowers of which were as green as grass although the bulbs, being unsalable, had remained undisturbed for three years. Mentioning the circumstance to an expert in the U. S. Department of Agriculture an effort was made to solve the riddle but to no good result. A reputable Holland bulb grower finally transfered the bulbs to Dutch soil saying that in two years the flowers would become as "yellow as gold." Of course this does not explain why southern forms of Double Van Sion "go green" and then grow out of it under different conditions. The moral however is: If you get a good strain of golden-yellow Double Van Sion that produces flowers

with unburst trumpets—treasure and keep it, for such are getting scarce.

ROSE-FLOWERED DOUBLE. (C. 14 in. †$3 doz.) Rich yellow and delightfully fragrant. This old favourite has outlived several popular names, originally being known as *"John Tradescant's Daffodil"* which was "botanized" into Tradescanthus and Tradescant's *Centifolius,* which was appropriate because the flower is really a conglomeration of small double flowers crowded together into a rosette. After Parkinson popularised it by the description in his Herbal published in 1629—the variety was afterwards also known as *"Parkinson's Rose-flowered Daffodil."* Botanically it is *"Lobularis plenissimus* or *grandi-plenus.*

DWARF DOUBLE SWEET SCENTED. (B. 10 in. †$2 doz.) Large, double, bright yellow, fragrant flowers. Dwarf sturdy growth, and does well in borders or naturalised in partial shade. It is usually catalogued under its botanical name or abbreviations of same which are sometimes confusing, its full title being *"Pseudo lobularis pumilus plenus,"* but often the first and sometimes the second words are omitted.

QUEEN ANNE'S DOUBLE. *Syns: capax plenus and Eystettensis.* (A. 7 in. †§¶75c ea.) A quaint old variety of greatest interest to the collector of varieties. The lemon yellow flowers are composed of six superimposed layers of six petals—like pointed stars—graduating in size. The single form is unknown.

RIP VAN WINKLE. (B. 9 in. †$6 doz.) A very rare and interesting doubled form of the single *Ajax Minor.* A native of Ireland. Dwarf habit. Early and free flowering. The small doubled flowers are pale yellow, and fragrant. Petals pointed and curiously twisted.

GERARD'S SILVER AND GOLD DOUBLE. (B. 9 in. †$7.50 doz.) This rare old variety: *N. Pseudo-Narcissus albus aureus plenus*—with abbreviations to suit the length of

catalogue line—is a very striking plant in bloom. Its medium-sized double flowers with silver and gold-coloured petals intermingled being very beautiful. It does best when naturalised in a partially shaded location in turf.

DOUBLE SCOTCH. (B. 12 in. † § ¶ $2 doz.) This double form of the wild Scotch daffodil, *N. Scoticus,* is also catalogued frequently under its botanical title *"N. Pseudo-Scoticus plenus."* It is a very showy variety with white and yellow petals interspersed.

DOUBLE ALL-WHITE TRUMPET DAFFODILS

DOUBLE WHITE TRUMPET. (C. 10 in. † $2.50 ea.) This, we believe, is the only double form of an all white trumpet daffodil now purchasable, and even it is very rare. Botanically it is known as *N. cernuus plenus,* being the double of the White Swan's Neck trumpet cernuus. The flowers are of exquisite beauty—cream-white, with a slight lemon tinge in the centre of the flower. It is most successfully grown in partial shade naturalised in grass. It resents manure.

DOUBLE MEDIUM CROWN DAFFODILS

This section is comprised of double forms of well-marked single varieties of *N. incomparabilis,* or the supposed direct progeny of natural crosses between an Ajax trumpet form and *N. poeticus.* The flowers of this group do not retain either trumpet or crown-like formation, for the corona bursts bounds, curves back and socially mingles with the petals, thus forming what is called a "rose-double" daffodil.

Like their single prototypes, these double forms are healthy, vigorous growers, bloom freely and adapt themselves to all sorts of cultural conditions except hot and fast forcing. They thrive in gardens and borders; are at home when naturalised; and when grown cool and slow in pots they flower beautifully during late winter.

APRICOT PHOENIX. (C. § ¶ * $50 ea.) An introduction of 1905. Flowers large and very double, crown petals apricot yellow, interspersed with the cream-white perianth.

ARGENT. (D. 18 in. § ¶ * $1 ea.) A recent introduction of strong growth, bearing beautifully formed star-shaped double flowers. Creamy white with yellow centres.

AURANTIUS PLENUS. (B. 17 in. § ¶ * 25c doz.) The common old double English garden daffodil known as *"Butter and Eggs,"* a name doubtless suggested by the colouring in the flowers which is of a light "butter-yellow" shading to orange at the centre. A free-growing and free-flowering variety, which if left undisturbed eventually forms large clumps or masses. Faintly fragrant.

GOLDEN PHOENIX OR ERINI. (B. 17 in. § ¶ * $1 doz.) A large-flowered double Irish form, botanically *"N. incomparabilis pallidus-plenus."* In effect the coloring is a rich golden yellow, but more closely anaylised lemon yellow petals are interspersed with the rich golden ones.

GOLDEN ROSE. (B. 17 in. § ¶ * $2 doz.) Very large, round and very double flowers, deep yellow with a darker golden centre.

ORANGE PHOENIX. (C. 17 in. § ¶ *40c doz.) Popularly known as *"Eggs and Bacon"* and as *N. incomparabilis albus aurantius plenus.* Robust and free flowering. The

large double flowers are composed of white petals with an orange coloured centre.

PLENIPO. (§ ¶ *$2.50 ea.) A choice selection bearing large, double rose shaped flowers of pale yellow.

SILVER OR SULPHUR PHOENIX. (C. 18 in. § ¶ *75c doz.) One of the best varieties in the double incomparable section. Botanically it is *"N. Pseudo-Narcissus albus plenus sulphureus"* but popularly known as *Codlins and Cream.* A robust grower, bearing very large double flowers of white, with sulphur colored centers.

PRIMROSE PHOENIX. (§ ¶ $3 ea.) A much admired variety with large double flowers of a primrose yellow. Award of merit R. H. S.

SEMI-PARTITUS PLENUS. (*$1 ea.) A rare and distinct old variety bearing double light lemon-yellow flowers. The pointed petals are arranged in six star-like superimposed rows in the same manner as in *N. Capax plenus.* It received a first-class certificate from the Royal Netherlands Horticultural Society.

DOUBLE POETICUS

DOUBLE POET'S NARCISSUS. (E. 15 in. *$1.50 hu.) It produces beautiful, large and fragrant double white flowers, which in purity, form and sweetness liken them to gardenias, for which reason it is often called the *"Gardenia-flowered narcissus."* Botanically it is *N. poeticus albus-plenus odoratus* and so is usually catalogued, though often with mystifying abbreviations. It thrives best in moist, loamy soil, often failing to flower in dry locations and it resents pot culture and forcing.

DOUBLE POLYANTHUS

Notwithstanding that the single forms of the cluster-flowered polyanthus narcissus are

so numerous there are but three double forms now offered by dealers. It is curious to note this as there were more in years gone by.

CHINESE SACRED. It frequently happens that a bulb of this popular variety will be found to produce flowers with double cups. It does not appear to be constant, however, and no separation of the single and double flowering forms has been made.

CONSTANTINOPLE. *Syn: Double Roman.* (B. $2 hu.) Very early and free flowering. Extensively forced by florists for winter cut flowers. It also does well when grown in pots. The perianth is white, the yellow cup usually double or semi-double.

NOBLISSIMUS PLENUS. ($1 doz.) Perianth cream coloured and a large double cup of orange yellow.

DOUBLE FLOWERING JONQUILS

That there are almost as many double forms of the sweet jonquils as there are singles is remarkable considering the few double varieties of narcissus produced among other types. The double jonquils range in size of flower and plant like their single prototypes, from the small true jonquil (*N. Jonquilla*) to the large hybrid, Campernelle jonquil (*N. odorus*).

DOUBLE JONQUIL. (E. § * 30c doz.) *N. Jonquilla plenus* is the correct botanical name of this doubled form of the true old single jonquil. Its beautiful rich yellow flowers

The true old type. If you have double Van Sion with well defined trumpets and the flowers without a trace of green take special care of the bulbs

The commoner rose-flowered, or "burst trumpet" type in which is no distinct division between the trumpet and the petals, thus making a rosette

TYPES OF DOUBLE VAN SION DAFFODILS

WILD NARCISSUS IN BERMUDA

Some varieties of polyanthus narcissus (*N. Tazetta*) have escaped from cultivation and finding a congenial home have become thoroughly naturalised. They are spoken of locally as "Bermuda jonquils"

are borne in twos and threes on short stocky flower stalks. It does better when naturalised in grass on dry warm hillsides than in the garden; but it flowers perfectly in pots, if grown cool and slowly. A late bloomer.

QUEEN ANNE'S DOUBLE JONQUIL. (B. 12 in. †$2 doz.) *N. odorus minor plenus.* This famous old variety bears two or three small sweet-scented double-rose-shaped flowers of rich golden yellow colour on twelve inch stems. It does well in shaded garden beds, naturalised in grass and is charming when grown in pots, five to six bulbs in a five inch pot.

GIANT DOUBLE JONQUIL. (C. 20 in. †75c ea.) *N. Campernelli plenus.* This magnificent jonquil is said to be a doubled Campernelle, but its strength of growth and size of flower seems to indicate that it is a double form of N. *odorus rugulosus maximus.* Under favoured conditions the flower stems attain a height of two feet, each stem carrying erect from two to six large double fragrant bright yellow flowers, which deepen to orange at the junction of double cup and perianth. A bed of these left undisturbed until established—for at least two years—will produce blossoms in such numbers and size as to be a revelation even to daffodil lovers.

CHAPTER XVIII

Some Autumn Flowering Species

These rare, curious, and dainty little members of the genus Narcissus are found growing wild, not often but occasionally, in Algeria, Morocco, Gibraltar, Spain, Italy and sometimes in other localities closely bordering the Mediterranean. They are all round or rush-leaved types bearing their flowers in jonquil-like clusters.

The characteristics of spring-flowering daffodils and narcissus, i. e. love of moist coolness is exactly reversed in these autumn flowering kinds. These require almost tropical heat, and dry seasons followed by wet ones. They are not recommended for ordinary garden cultivation in the North, though they may be grown in frames covered with glass during the late autumn and winter months and may also be grown and flowered in pots.

N. serotinus. (10 in. 50c. doz.) The fragrant little flowers of this variety, borne in twos or threes on slender

stems, have spreading white petals turning slightly backwards; the lemon-yellow cup is very small. The leaves are produced late in the fall, after the plant has ceased blooming, therefore it must be protected with glass until growth has been completed if flowers another season are desired.

N. SEROTINUS, VAR. ELÆGANS. This variety somewhat resembles the preceding differing in the following particulars: the pure white petals are more slender and very pointed; the small yellow cup is saucer-shaped. The leaves and flowers are produced at the same time.

N. VIRIDIFLORUS. ($2 ea.) The green narcissus, a rare little species blooming in November. Its small fragrant star-like flowers with insignificant cups—are borne in two to four flower clusters on tall stems. The coloring of the flower is a really pretty shade of light green.

CHAPTER XIX

Hybridising and Raising From Seed

In entering into this fascinating field of hybridising and raising seedlings, avoid above all things any haphazard way, making what Mr. Darwin called "fool's experiments." Have some definite object in view. The production of a King Alfred, for instance, in an early flowering form which might possibly be accomplished by crossing that variety on spurius major or Golden Spur, or vice versa, would be a real achievement. Always work for constitution, vigour of growth and sturdy stems, as well as for size, form, substance and freedom of bloom; and for rich and deep, or else sharply contrasting colouring — no washed-out blends are needed. The petals are usually the weakest part of the flower and can stand improving. In many flowers they lack substance and breadth. In some varieties I find they wither and curl back in a sunny exposure, while the trumpet or crown is still holding well.

There are hundreds of desirable possibilities to work for and hundreds of possible combinations to work with, this being one of the phases of daffodil culture that makes it so fascinating. The enthusiast's culmination of delight is in watching the development of the first flowers of his own seedlings, for he is always sure that something will develop to astonish the world—possibly a silver-winged Weardale with scarlet trumpet or a golden-winged Autocrat with snow-white crown.

In every fertile flower of Narcissus, the long, slender style with its swollen stigma, after the lobes develop, exudes a sticky substance which indicates that the stigma is in a receptive condition. Pollen is the yellow, dust-like grains adhering to the anthers which dangle at the ends of the six stamens surrounding the stigma. When ripe pollen comes into contact with the stigma, pollination results, which if effective, is called fertilisation. When the pollen of a flower falls upon its own stigma it is self pollination or self fertilisation. If the pollen is that from another flower of the same type on a different plant, it is cross pollination. A true hy-

brid is the result of crossing quite different flowers.

The flowers to be artificially pollenized should have their anthers removed before the pollen is ready to shed, to prevent self pollination. Then tie a piece of netting over the flower to prevent insects from carrying foreign pollen to the stigma. When the latter is ripe for the operation, apply the pollen from the chosen flower by means of a camel's hair brush slightly moistened, or a bit of ivory or bone. Re-cover the flower operated upon with netting. It is advisable to repeat this operation two or three times on successive days to make sure that the purpose has been accomplished. If fertilisation is successful, the ovary will soon develop into a seed pod and as it nears maturity, it should be carefully watched and gathered before it bursts and scatters its seeds.

When the intended parents flower at different times, artificial crossing is accomplished by retarding the early flowering sort and hastening the flowering of the late sort by forcing under glass if necessary. But if, normally, the difference in time is not over two weeks,

this may be accomplished in outdoor cultivation by selecting an early site for the late-flowering kind and a late site for the early one, as discussed in Chapter II. By adjusting the regular forcing methods given in Chapter III., types widely differing in time of bloom may be brought to flower simultaneously. In this way, the poetaz race (the result of crossing the late flowering *N. poeticus,* var. *ornatus* with an early-flowering Tazetta variety) was made possible. Also, in the same way, the Sprengeri hybrids were produced by crossing a large yellow trumpet variety with the Paper White. The Leedsii varieties are crosses of the white trumpets and poeticus.

But it is not alone the crossing of species and widely differing forms that gives us the most valuable results. Most of the best large new daffodils of the present time have been produced by crossing individuals of the same group. King Alfred, the acknowledged peer of the all-yellow trumpets—certificated in 1899 and still worth $15.00 per bulb—is a cross between Maximus and Emperor, large yellow trumpet daffodils. Other instances

could be cited to show that crossing in the same group often produces progeny superior to either parent.

SOWING DAFFODIL SEEDS AND RAISING THE SEEDLINGS

The seeds of narcissus and daffodils should be sown as soon as ripe, about August, in wooden boxes with holes in the bottom, or earthen pots or pans. Cover the holes with broken pottery, then place over the hole a layer of more finely broken pots or cinders and another layer of cocoanut fibre refuse, or old fibrous roots from sods to prevent the soil from filling up the rubble and stopping the drainage. Over this place a two or three-inch layer of good loamy soil free from manure, mixed with about ten per cent. of sand. On this sow the seeds, scattering them thinly over the surface, and cover with half an inch of loamy soil mixed with one-half sand. The object of so much sand is to prevent the soil from caking and forming a surface which it would be difficult for young growth to penetrate. The boxes, pots or pans containing

the seeds should be placed in a cold-frame on a layer of ashes two or three inches deep, to keep worms out and to further facilitate drainage.

The seedlings may appear in a month or two—little narrow, rush-like leaves—but they sometimes come up at intervals throughout the winter and sometimes do not germinate until spring. The seedlings are to remain undisturbed in their boxes or pans in the frame for about two years or until the little bulbs have attained the size of large peas, when they are to be transplanted to a cool, semi-shaded situation in the garden in a raised bed of finely prepared sandy loam. Here they should remain until the flowering size is reached.

The time required for flowering from the seed differs with the sections. The miniature daffodils, namely, Bulbocodium, triandrus, cyclamineus, juncifolius, etc., will generally flower the third year after sowing; but the larger-growing kinds can hardly be expected to flower under four or five years from the seed and even then, they will continue to improve for a year or two and give their first

characteristic flower in from seven to ten years.

Crosses in which Tazetta varieties take place are usually longer in producing their first flowers than any other combinations.

APPENDIX

A Key to the Daffodils

BY

Wilhelm Miller and Leonard Barron

A Key to the Daffodils

INCLUDING ALL THE HYBRID GROUPS OR "SECTIONS" AND IMPORTANT SPECIES.

THE following key is, we believe, the first which clearly distinguishes all the important sections and species of the daffodil or narcissus. If the beginner will spend five minutes upon it he will get a better grasp of the genus Narcissus than he can get in any other way, because the key shows in the briefest possible form how each species and hybrid group section differs from any other, and also what it has in common with any other. Moreover, it not only gives one a vivid mental picture of the whole genus, but it also enables one to determine with certainty, in the shortest possible time, to what section an unknown flower belongs. Then by referring to the description list of varieties in the first part of the book the exact name of the flower can be determined.

In order to get a grasp of the genus Narcissus, notice first the distinctness between A, AA, and AAA. Here we have the daffodils

divided into the (A), large -- ; (AA), medium -- ; and (AAA), small-crowned groups, which are better distinguished commonly as trumpets, cups and saucers. Under A, notice that we have B, BB, and BBB, which show that the petals spread horizontally in the first species * point backwards in species Nos. 5 and 6 and forward in No. 7.

In like manner, the most important distinctions among the medium-crowned daffodils are indicated by B and BB under AA; namely, that the leaves are broad and flat in species 8 to 15 inclusive, while they are narrow and rush-like in species 16 and 17.

Again, among the small-crowned daffodils, the most important distinctions are shown by B, BB, and BBB, which clearly indicate the number of flowers on a stem possessed by species Nos. 18 to 28.

Suppose now that we wish to place an unknown flower in its proper section. We choose first between A, AA, and AAA. If our specimen has a large-crowned flower, it

* (Note: For the present purposes the typical hybrid groups, or sections, are regarded as species, and the perianth segments are referred to simply as "petals").

clearly belongs under A, and we must next choose between B, BB, and BBB. The petals spread horizontally, which places it under B. If our specimen has only one flower on a stem, it belongs then under C, and we must choose between D and DD. If it has a spread trumpet, it belongs under D, and if the trumpet is straight, and flared only at the rim, it clearly belongs under species No. 1, namely *Narcissus Pseudo-Narcissus,* which is the most important group of all as it contains most of the common trumpet daffodils.

The authorities disagree about *N. Backhousei.* Even Peter Barr puts it in the large-crowned section in his catalogue and in the medium-crowned section in his book. All agree that it is a hybrid between a large-crowned and a medium -- or small-crowned type (some say incomparablis, some poeticus, and some Tazetta), yet we have searched the books in vain for any indication that the flower of Backhousei has a crown appreciably shorter in relation to the petals than the typical trumpet varieties. On the contrary, Peter Barr distinctly states that the cup is nearly as long as the petals. Hence, *N. Backhousei*

may be sought below in either the large -- or medium-crowned sections.

The new section, *N. Englehearti,* has not yet been described with sufficient precision to enable us to insert it in the key. It is closely allied to *N. Burbidgei,* and indeed some of the varieties of the new section were formerly included in Burbidgei. The crown is short, spreading and much fluted.

A. The large-crowned, or trumpet daffodils; crown almost as long as the petals (here might be sought No. 9) or longer; perianth tube much shorter than the crown and wide.

B. Petals spreading horizontally.

C. Number of flowers on a stem only one.

D. Trumpet straight or flared only at the rim
1. *N. Pseudo-Narcissus.*

DD. Trumpet flaring widely like a hoop skirt
2. *N. Bulbocodium.*

CC. Number of flowers on a stem two or three
3. *N. tridymus.*

BB. Petals pointing backward

C. Flowers large: height twelve inches: hardy
4. *N. Johnstoni.*

CC. Flowers small: height six inches: for pot culture of rockeries .....5. *N. cyclamineus.*

BBB. Petals pointing forward.....6. *N. Humei.*

AA. The medium-crowned, or cup daffodils: crown more than one-third and up to three-fourths as long as the petals: perianth tube about as long as the crown.

B. Leaves broad and flat.

C. Flowers large: height a foot or more, hardy.

D. Blossoms not drooping.

E. Petals generally yellow, sometimes white.

F. Cup a third or more the length of the petals. 7. *N. incomparabilis.*

FF. Cup a fourth to a third of the length of the petals ..... 8. *N. Barrii.*

FFF. Cup nearly as long as the petals. 9. *N. Backhousei.*

EE. Petals always white.

F. Cup white ..... 10. *N. Leedsii.*

FF. Cup orange-scarlet: crown half as long as the petals ..... 11. *N. Bernardi.*

FFF. Cup yellow, sometimes tinged orange: crown more than half as long as the petals. 12. *N. Nelsoni.*

DD. Blossoms drooping..... 13. *N. montanus.*

CC. Flowers small: height four to nine inches: for pots or rockeries..... 14. *N. Macleaii.*

BB. Leaves narrow, rush-like.

C. Petals reflexed ..... 15. *N. triandrus.*

CC. Petals spreading horizontally.

D. Flowers large: height twelve to twenty-two inches: petals not imbricated: hardy. 16. *N. odorus.*

DD. Flowers small: height three to four inches: petals imbricated: for pots or rockeries. 17. *N. juncifolius.*

AAA. The small-crowned or saucer daffodils: crown less than one-third as long as the petals: perianth tube much longer than the crown and narrow.

B. Number of flowers about a dozen: only for indoor culture North.

C. For pot culture..... 18. *N. Tazetta.*

CC. For culture in pure water.....19. *N. Tazetta* var. *orientalis.*

BB. Number of flowers usually three to eight. 20. *N. poetaz.*

BBB. Number of flowers one (except "Twin-Flowered," a variety of poeticus)

C. Leaves broad and flat.

D. Saucer nearly flat.....21. *N. poeticus.*

DD. Saucer a trifle deeper.....22. *N. Burbidgei.*

CC. Leaves narrow, rush-like.

D. Blooming in autumn.

E. Flowers all green.....23. *N. viridiflorus.*

EE. Flowers white with yellow crown.

F. Flowers before leaves.....24. *N. serotinus.*

FF. Flowers with leaves.....25. *N. elegans.*

DD. Blooming in May.

E. Yellow at first, becoming sulphur. 26. *N. gracilis.*

EE. Colour not changing.

F. Petals and cup yellow.....27. *N. Jonquilla.*

FF. Petals pale yellow: cup yellow or orange.. 28. *N. intermedius.*

INDEX TO SPECIES

The following index to the species or sections will enable anyone to locate its place in the preceding Key. The numbers immediately following the names refer to the order in which the names are given in the key; the page references (in parenthesis) indicate where the full descriptions of the varieties of the section, and their appraisement as garden

plants, by Mr. Kirby, will be found in the preceding chapters.

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